



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



FEED THE FUTURE UGANDA COMMODITY PRODUCTION AND MARKETING ACTIVITY

Annual Report
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Cover Photo: A farmer under Bugaya Area Cooperative Enterprise in Buyende District taking her produce to the cooperative for sale (Photo credit: Feed the Future Uganda Commodity Production and Marketing Activity).

DISCLAIMER

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ACRONYMS

ACE	Area Cooperative Enterprise
ACPL	Ankole Coffee Processors Limited
BAIDA	Bugiri Agribusiness and Institutions Development Association
BICOPA	Bisheshe Coffee Processors Association
CLA	Collaborating, Learning, and Adapting
CPM	Feed the Future Commodity Production and Marketing Activity
DFCU	Development Finance Company of Uganda Limited
DLG	District Local Government
EEA	Feed the Future Uganda Enabling Environment for Agriculture Activity
EAC	East African Community
ETC	Every Tree Counts
FAQ	Fairly Acceptable Quality
FY	Fiscal Year
GLC	Great Lakes Coffee
GOU	Government of Uganda
ICT	Information and Communication Technologies
IP	Implementing Partner
IEC	Information, Education, and Communication
KEGRA	Keirere Green African Agency
KDC	Kinkizi Development Company
MAAIF	Ministry of Agriculture, Animal Industry, and Fisheries
MFPED	Ministry of Finance, Planning, and Economic Development
MSMEs	Micro, Small, and Medium Enterprises
MT	Metric Ton
NAADS	National Agricultural Advisory Services
NALG	Nakisenhe Adult Literacy Group Ltd.
NARO	National Agricultural Research Organization
PHH	Post-harvest Handling
SCP	Satellite Collection Point
SMEs	Small, and Medium Enterprises
TAABU	Together Agree and Build Unity Integrated Women's Group
UCDA	Uganda Coffee Development Authority
UGX	Uganda Shilling
UNBS	Uganda National Bureau of Standards
USG	United States Government
USAID	United States Agency for International Development
VA	Village Agent
VSA	Village Service Agent
WFP	World Food Programme
ZAABTA	Zirobwe Agaliawamu Agribusiness Training Association

SECTION I: EXECUTIVE SUMMARY

This report describes work performed during Fiscal Year (FY) 2017 under the Feed the Future Uganda Commodity Production and Marketing Activity (hereinafter referred to as CPM or the Activity), in partnership with 37 exporters, 163 traders, 1,552 Village Agents (VA)s and 274 support actors including input companies, seed companies, banks, business development services (BDS) providers, and fabricators. CPM exists to increase wealth and promote the long-term prosperity of rural Ugandan families in 34 Feed the Future Uganda focus districts. As the Activity approaches its March 2018 end date and in line with the activity's Transition and Sustainability Plan, the majority of the work conducted during the reporting period was led by the CPM-affiliated intermediaries with CPM providing mentoring and linkages.

During FY 2017, the aforementioned traders and VA intermediaries supported smallholder farmers to increase farm productivity, gain access to competitive markets, increase incomes, and attain food security. As a result, CPM reached a total of 65,139 new farmers, bringing the cumulative number of smallholder farmers who have received United States Government (USG) support through CPM to 434,797. CPM continued to promote innovations that increase farmers' productivity, and improve the quality and market competitiveness of coffee, maize, and beans. Innovations included the "Gimusa Coffee Kit" – an affordable package of blended fertilizer, herbicide, and insecticide for coffee trees; the "Mutindo Pulper Bike" – a bicycle-powered mobile coffee pulper; a mobile coffee huller to improve coffee quality after harvesting; mobile payments to increase access to finance; digital finance systems for crop insurance; digital weighing scales and an e-voucher payment system offering farmers a convenient way of ordering and paying for genuine inputs and simple storage equipment.

CPM also supported behavior change in the market system through a variety of behavior change campaigns intended to improve value chain processes and relationships and ultimately lead to increased household income and resiliency. For example, a behavior change radio program that consisted of 13 serial drama skits aired for 13 weeks on three different radio stations in central and western Uganda, and reached an estimated 1.182 million listeners from 11 districts.

To boost value chain effectiveness, efficiency, and foster leadership, CPM facilitated systemic market change through continuous dialogue among main actors and support actors in the agriculture sector. Intermediaries like VAs and traders engaged with support actors such as financial institutions, Information and Communications Technology (ICT) firms, and agro-input companies, and demonstrated a willingness to take risks to provide a range of efficient production and marketing services that benefit smallholder farmers. These actors included visionary, forward-thinking leaders at financial institutions including Centenary Bank, Orient Bank, Development Finance Company of Uganda Limited (DFCU), and Bank of Africa; insurance companies such as Jubilee Insurance, Lion Assurance, UAP Insurance Company, Goldstar, and National Insurance Corporation; and ICT firms such as MobiPay and Akorion Company Ltd. By fostering leadership across the board, CPM successfully facilitated the dissemination of knowledge, skills, tools, and opportunities that spark and leverage leadership among farmers, community members, VAs, traders, farmer organizations, processors, and end buyers.

Strengthening and forming institutions is key to sustaining CPM's interventions and results. During the reporting period, CPM facilitated the formation of 28 VA associations, five district

traders' associations, and five sub-regional traders' associations to continue incentivizing greater transparency, trust in business practices, and to help monitor and regulate intermediary value chain actors. The associations will promote best practices, ensure adherence to sector procedures, and protect the interests of traders, VAs, and farmers. To support current traders' associations as well as guide the formation of new ones, CPM collaborated with the Ministry of Trade, Industry and Cooperatives to develop a *Traders' Code of Conduct* which will be adopted by traders, local governments, and cooperatives.

To leverage resources and knowledge, CPM collaborated with a variety of implementing partners (IPs), government institutions, and donors. During FY 2017, CPM partnered with the Feed the Future Uganda Enabling Environment for Agriculture Activity (EEA) to promote the East African Community (EAC) grain standards among 126 traders and 286,401 farmers. CPM also partnered with the World Food Programme (WFP) and Akorion Company Ltd. to enhance production and market support for WFP Satellite Collection Points (SCP). Through a series of four public-private partnership workshops, CPM collaborated with the Ministry of Agriculture, Animal Industry, and Fisheries (MAAIF) to integrate the VA Model into the government's extension system. To further the integration of the model and ensure sustainability of CPM's interventions, the Activity collaborated with MAAIF to train 98 sub-county agricultural officers with skills to promote and scale out the model to additional partners, districts, and value chains.

Finally, as part of CPM's Transition and Sustainability Plan, the Activity conducted two of four planned "Regional Closeout Dialogues" in Mbarara (west) and Masindi (north). The dialogues will 1) ensure a shared understanding and ownership of CPM's approaches and tools necessary to sustain impact; 2) create an opportunity to discuss challenges, gaps, and opportunities; and 3) identify opportunities for future business collaborations between stakeholders. Key challenges identified during the dialogues include the prevailing hostility towards intermediaries by government and donors (from the misperception that intermediaries exploit farmers) and intermediary access to affordable finance. Key recommendations included fostering additional public-private partnerships that focus on increasing on-farm productivity, reducing post-harvest losses, ensuring access to affordable technologies, and linkages to competitive markets. Further, government and development partners should continue supporting the formation and strengthening of traders' associations. Detailed challenges and recommendations are described in Section VI.

Life of Activity Indicator Achievement

As demonstrated in the figure below, CPM exceeded life of Activity (LOA) performance targets for 96 percent of indicators, and met all indicator targets through FY 2017. Overall, 434,979 farmers in 34 Feed the Future districts realized improved crop productivity and accessed better markets, while incremental sales rose from USD 7,547,941 in 2014 to USD 392,288,452 by the end of FY 2017, resulting in increased farmer income and improved food security.

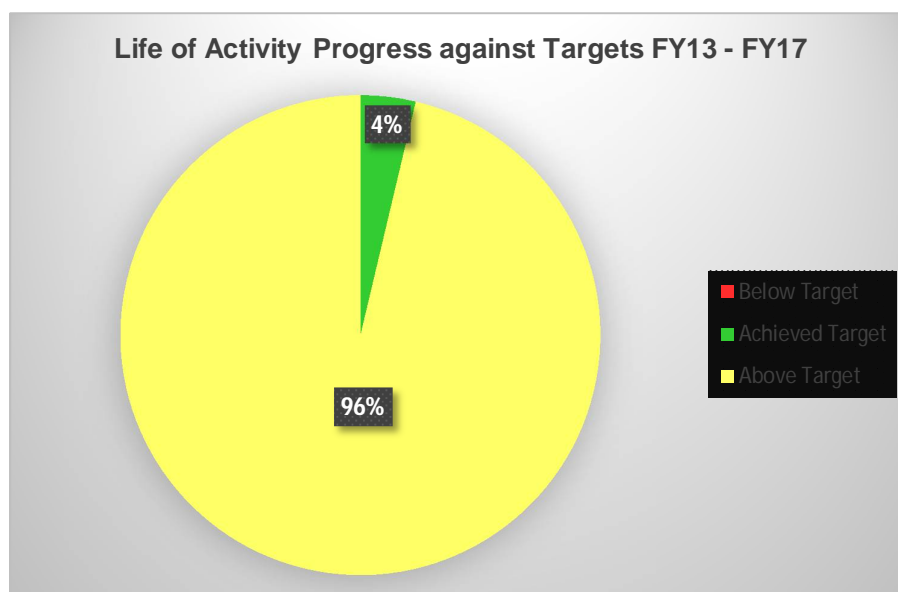


Figure 1: Life of Activity Progress against Indicators as of FY 2017

Commodity Performance in FY 2017

Coffee

CPM and its partners focused on innovations that increase on-farm productivity and quality of exportable coffee. To contribute to the Government of Uganda (GOU)'s strategy of increasing coffee production to 20 million bags by the year 2020, the Activity collaborated with the Uganda Coffee Development Authority (UCDA) to continue promoting the Every Tree Counts (ETC) approach that focuses on increasing productivity of individual trees, rather than acreage, and ensures that each coffee tree receives the correct amount of inputs each season. As a part of the approach, CPM launched and promoted the Gimusa Coffee Kit with a variety of private-sector partners. The kit offers smallholder coffee farmers an affordable package of blended fertilizer, herbicide, and insecticide that can be used for up to 50 trees. Combined with production services provided by VAs, the kit is designed to increase the productivity of each coffee tree from 0.5 kilograms to 3 kilograms of coffee per tree annually. In FY 2017, CPM continued to work with 65 coffee partners and reached an additional 27,638 coffee farmers bringing the life of Activity total to 105,148 coffee farmers. Farmers produced a total of 88,151 MT of coffee and achieved sales of \$77,666,864 compared to FY 2016 where 77,510 coffee farmers had sales of \$59,598,127. In 2017, the average prices for Fairly Acceptable Quality (FAQ) and Arabica parchment were UGX 5,250 and UGX 6,140 respectively, compared to UGX 4,450 and UGX 5,425 in 2016. Farmers earned a gross margin of \$1,586 per hectare compared to \$ 1,781 for FY 2016, a decrease which can be attributed to currency fluctuations.

Maize

Activity partners continued to promote the adoption of a variety of innovations in maize, including conservation farming, affordable irrigation systems, and improved post-harvest handling equipment such as mechanical driers and mobile shellers. To mitigate the effects of the Fall Armyworm that impacted 13 major maize districts in 2017, CPM collaborated with Akorion Company Ltd. to engage a variety of maize partners to train Village Service Agents (VSAs) on proper storage, handling, and application of insecticides. Further, CPM partnered with MAAIF and National Agriculture Research Organization (NARO) to develop and distribute posters on identification and management of the Fall Armyworm. In line with GOU's

Food Fortification Policy for maize flour, CPM partnered with the USAID/SPRING Project, Uganda National Bureau of Standards (UNBS), the National Drug Authority, and the Private Sector Foundation to train 20 maize processors and traders on the recommended procedures and equipment for food fortification. In FY 2017, CPM worked with 92 maize intermediaries and reached an additional 4,991 maize farmers bringing the life of Activity total to 177,723 maize farmers who planted 211,916 hectares under improved technology practices. Despite this success, intermittent rains and the Fall Armyworm outbreak negatively impacted total maize production and prices. As a result, Farmers produced a total of 331,295 MT in 2017 (compared to 353,258 MT in FY 2016), and reached sales of \$54,250,678 (compared to \$36,335,849 in FY 2016). The average farm gate prices ranged from UGX 800 to UGX 1,200 per kilogram, and farmers earned \$514 gross margin per hectare compared to \$618 earned in 2016.

Beans

CPM facilitated out-grower schemes and block farms in partnership with Pearl Seeds, Grow More Seeds, Kyazanga Area Cooperative, and Kitumbi Area Cooperatives to increase beans production. Further, to promote beans consumption and decrease fuel (i.e. wood and charcoal) consumption as a part of CPM's partnership with Gryphon Group, the Activity engaged Research World International, a private firm, to conduct a market research study on the adoption and usage of pre-cooked beans. The findings were overall positive, and demonstrated that consumers are willing to buy pre-cooked beans at an average price of UGX 3,500/kg. The study also revealed that 60 percent of institutions surveyed believe that the quality of the product is good, and is especially well-received by primary schools and government and relief agencies. CPM also worked with 75 beans intermediaries and reached an additional 32,550 beans farmers bringing the life of Activity total to 152,108 beans farmers. Farmers planted a total of 105,236 hectares of beans under improved technologies and produced 50,488 MT, of which 28,573 MT was sold at a value of \$14,052,740, compared to 2016 where farmers sold 30,265MT valued at \$10,464,988 from 108,898 hectares. The average beans price ranged from UGX 1,800 to UGX 3,000 per kilogram and farmers earned \$471 gross margin per hectare compared to FY2016 gross margin of \$391 with prices between UGX 1,300 to UGX 1,900 an increase in gross margin that is attributed to farmers utilizing promoted affordable technologies such as small fertilizer packs to increase production without opening new land under production.

SECTION II: BACKGROUND

CPM is implemented through a five-year, Cost-Plus-Fixed-Fee contract funded by the United States Agency for International Development (USAID). CPM is part of USAID/Uganda's Feed the Future Value Chain Development Project that builds on more than 20 years of agricultural development experience and lessons learned by USAID/Uganda, Ugandan partners, and other donors. CPM is implemented by Chemonics International Inc. and began on March 28, 2013. This FY 2017 annual report provides an overview of CPM's approach, and highlights of FY 2017 results, achievements, and lessons learned.

CPM works to increase productivity and incomes of rural families, so they can lift themselves out of poverty and thrive. To this end, the Activity harnesses market forces and uses innovative methods to increase the quantity and quality of coffee, maize, and beans that farmers produce and sell in 34 of the 38 Feed the Future focus districts throughout Uganda. CPM achieves this by: 1) working with exporters and other buyers to extend a variety of services down value

chains to improve production and marketing; and 2) building trust and win-win relationships between value chain actors to change processes and behavior. In particular, CPM focuses on incentivizing value chain middle actors to improve relationships up and downstream. CPM employs a facilitative market system approach by engaging value chain middle actors (e.g. traders, producer organizations, and processors) who invest resources and establish relationships that incentivize and build the capacity of farmers to improve productivity and market access across the target value chains. CPM embraces the collaborating, learning, and adapting (CLA) framework promoted by USAID/Uganda. Across the three value chains, CPM engages government institutions, private-sector entities, and other Feed the Future partners in planning, monitoring, mapping outcomes of innovations, and scaling-up best practices and/or re-designing strategies and tactics within regions and value chains.

Overview and Approach

The Intermediate Results (IRs) and sub-IRs depicted in Figure 1, as established in the CPM contract, provide the framework for the annual work plan and results monitoring. At the highest level is USAID’s Development Objective 1 (DO1): Economic growth from agriculture and the natural resource base increased in selected areas and population groups.

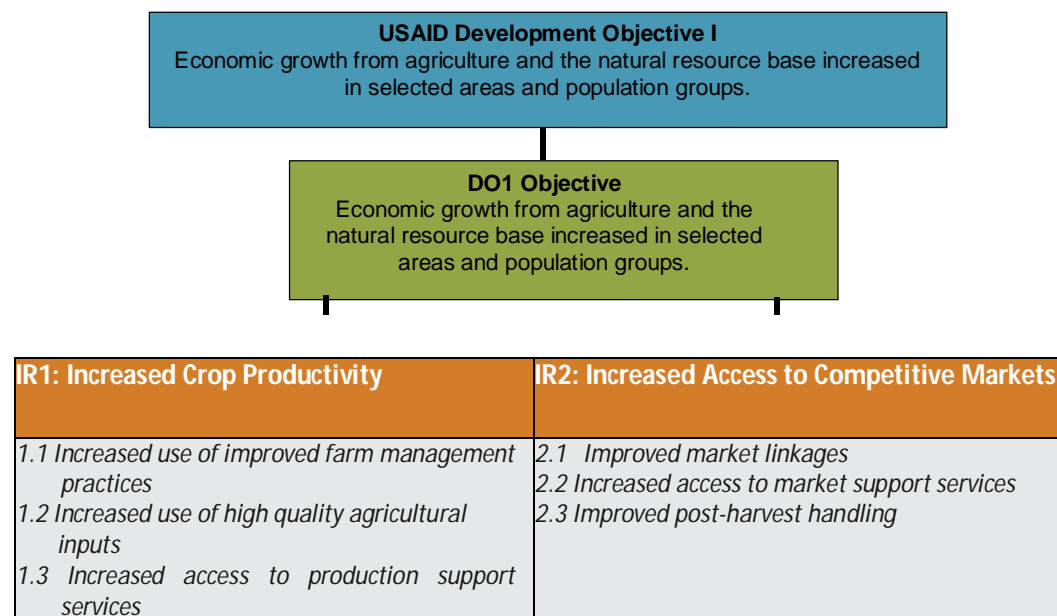


Figure 2: Results Framework

The Activity contributes significantly to DO1 through CPM’s objective to sustainably increase the production and marketing of high quality maize, beans, and coffee in Feed the Future focus districts. CPM’s objective will be achieved through annual work plans focused on the two IRs: 1) increased crop productivity, and 2) increased access to competitive markets, and their respective sub-IRs and tasks. As CPM gained experience through implementation over the past 3.5 years, it has modified and adapted select approaches used to implement the tasks that support its development hypothesis in Figure 2 (below).

If... middle value chain actors understand the incentives to improve their supply chains and
If... CPM interventions change their behavior so that they invest their time/money to:

- Increase farmer access to and use of high quality inputs
- Improve farmer access to and use of production support services
- Increase farmer knowledge and adoption of improved farm management practices
- Increase farmer adoption of recommended post-harvest handling practices

Th Then... farming families will sustainably increase production and sales of high quality maize, beans and coffee, which will increase their income and long-term prospects.

Figure 3: Development Hypothesis

In the first year of implementation, CPM adopted a collaborating, learning, and adapting (CLA) approach to implementation. The CLA agenda is supported by a robust monitoring and evaluation system that aligns promoted innovations and tasks to desired outputs and outcomes. The system supports both internal and external learning needs. The Activity has always used a facilitative value chain approach aimed at improving relationships among middle value chain actors and farmers to achieve sustainable productivity through promotion of incentives that motivate value chain actors and encourage public-private investment and collaboration on sector competitiveness strategies. CPM's development hypothesis is achieved through multiple intermediary business models including producer organizations, cooperatives, traders linked to buyers, small-scale processors (i.e. coffee hullers and washing station operators), agro-dealers, warehouse managers, block farm nucleus centers, and private sector and non-governmental organization (NGO) farm service centers. Other key stakeholders engaged include grain and coffee

cooperative unions, the Millers' Association, processor and seed companies, financial institutions, ICT service providers (e.g. mobile money), equipment fabricators, traders, village agents, and input agents.

Multi-stakeholder engagement helped cultivate "buy-in" using a facilitative value chain approach. CPM engaged private sector entities by establishing win-win partnerships with other Feed the Future activities and engaging agro-input suppliers, exporters, and trade institutions. Through these partnerships, CPM demonstrated to smallholder farmers (including women farmers) that self-sustaining innovations, extension services, modern technologies, policy promotion, and other proven practices can effectively increase agricultural growth, improve livelihoods, and reduce poverty. Furthermore, while CPM used the CLA methodology to adjust its implementation approach, the Activity has also significantly transformed its operational structure and mentored staff to go beyond a simple value chain approach to a more expansive facilitative market system approach to value chain development.

Sustainably increasing the production and marketing of quality coffee, maize, and beans

In FY 2017, 1,552 intermediaries mentored by CPM supported smallholder farmers to sustainably increase their productivity and income by strengthening their access to production and marketing services. During the reporting period, 434,979 smallholder farmers (56 percent male, 44 percent female) directly benefitted from CPM interventions. The value of incremental sales in FY 2017 was \$122,718,529 sold by 434,979 farmers compared to a FY 2017 target of \$156,106,145. This represents a 20 percent increase above FY 2016 incremental sales of \$97,759,965 by 226,000 farmers. The 22 percent decrease against FY 2017 targets for the value

of incremental sales by farmers was due to the Fall Armyworm outbreak, which negatively affected maize production and prices.



\$ Farmers' Gross Margin		
Commodity	FY2017	FY2016
Beans	471	391
Coffee	1,586	1,781
Maize	514	618

\$ Value of Incremental Sales		
	FY2017	FY2016
	122,718,529	113,336,984

SECTION III: INTERMEDIATE RESULT 1.0 INCREASED CROP PRODUCTIVITY

Under this intermediate result, with a mandate to increase the incomes of Ugandan families, CPM and its partners applied innovative approaches to increase crop productivity. Working with various partners in the public and private sector, the Activity promoted interventions to support farmers to improve farm management practices including adoption of quality inputs. This enabled farmers to increase the area under improved technologies, resulting in increased yields and income. Additional interventions included promotion of good agricultural practices (GAP), including resilient varieties, irrigation, labor-saving technologies and conservation agriculture practices. Further, to increase farmers' access to quality agricultural inputs, the Activity promoted various input sales initiatives. The Activity also promoted the use of ICT tools such as the Ezy-Extension, developed by Akorion, to improve farmers' access to agriculture extension services. CPM and a local fabricator Munyegera Agro-machinery, invested in designing and promoting three new labor-saving technologies that meet the needs of women farmers' namely: a coffee bicycle pulper, mobile irrigation cum maize thresher and a mobile beans thresher. Finally, through grant and SAF funding, CPM partnered with private sector players to promote farmers' access to production support services. Key achievements are highlighted in the graphics below.

FY2017 Key Highlights and Achievements



FY 2017	FY 2016
65,684	12,600
Number of producer organizations and trade/business associations receiving USG assistance.	



FY 2017	FY 2016
341,463	336,520
Area under improved management.	



FY 2017	FY 2016
434,797	369,840
Number of farmers benefiting from CPM initiatives.	



FY 2017	FY 2016
326,245	275,693
Number of households benefiting directly from USG assistance.	



FY 2017	FY 2016
\$7,149,186	\$ 5,776,846
Value of new private sector investment in the agriculture sector leveraged by CPM.	



FY 2017	FY 2016
667	550
Number of full-time equivalent (FTE) jobs created with USG	
7	

IR 1.1 Increased use of improved farm management practices

Promoting improved farm management practices to increase productivity

During the reporting period, CPM reached an additional 65,179 farmers, bringing the life of Activity cumulative total to 434,979 farmers. CPM supported Zirowwe Agaliawamu Agribusiness Training Association (ZAABTA), Bugaya Area Cooperative Enterprise, Together Agree and Build Unity Integrated Women's Group (TAABU), Joseph Initiative, and Munyegera Agro-machinery to conduct six farmer field learning days to showcase a variety of labor-saving technologies including zero tillage planters, mobile irrigation systems, mobile maize shellers, mobile beans threshers, mobile coffee pulpers, and flat-bed dryers. As a result, 15 farmer groups acquired bean threshers and irrigation systems.



Fall Armyworm poster produced by CPM

To mitigate the impacts of the 2017 Fall Armyworm outbreak across 13 major maize districts, CPM collaborated with Akorion to engage a variety of maize partners including Joseph Initiative, Kakinga Millers, Keirere Green African Agency (KEGRA), Manyakabi Area Cooperative Enterprise (ACE), Bugiri Agribusiness and Institutions Development Association (BAIDA), Kamuli Agribusiness Initiative Development Association, Nakisehne Adult Literacy Group, Bugaya ACE, ZAABTA, Sanyu Investment, Twezimbe Company, and Masaba Rural Producer Organization. Through

these partnerships, CPM trained 428 VSAs on proper storage and application of insecticides (in accordance with CPM's PERSUAP); partnered with MAAIF and NARO to produce and distribute posters on Fall Armyworm management to enable VSAs to effectively support and train farmers on fall army worm mitigation; and on a cost-share basis, invested \$17,000 to support trader-affiliated youth spray teams (from KEGRA, Akorion, and the ZAABTA-affiliated "Nokia Boys") to acquire electronic spray pumps resulting in the teams spraying an area covering 28,614 hectares and sales of \$1.4 million in insecticides.

Every Tree Counts: Increasing coffee productivity

To contribute to the Uganda Vision 2020 goal of increasing coffee production from 3.5 million to 20 million bags, the Activity continued promoting and scaling-out the ETC approach. This approach aims to increase the productivity of coffee trees by combining effective application of the "Gimusa" (meaning "fertilize" in Luganda) Coffee Kit (which contains 10 kilograms of blended fertilizer, 0.5 milliliters of herbicide, and 300 milliliters of insecticide) with the provision of VA services. ETC focuses on increasing productivity of individual trees from 0.5 to 3 kilograms annually, rather than acreage, and ensures that every coffee tree in a smallholder farmer's garden receives the correct amount of



A village agent under KEGRA displaying the ETC inputs pack for 50 coffee trees

agro-chemicals each season. The contents of the kit are sufficient for 50 trees which for most smallholder coffee farmers is affordable at UGX 85,000 per kit, per season.

To ensure smallholder farmers are positioned to increase yields of every coffee tree from 0.5kg to 3kgs, CPM partnered with Akorion and champion traders from the central, eastern, and western regions to train 534 youth VAs/VSAs on applying the *Gimusa* Coffee Kits and the ETC approach. Moreover, KEGRA took the initiative to train an additional 150 VAs on their own. The VAs/VSAs were trained and equipped with skills on implementing ETC with the goal of addressing causes of low yields and poor-quality coffee in Uganda (e.g. aging coffee trees, poor farming practices, poor quality and/or counterfeit inputs, limited or ineffective extension services, limited access to affordable production support services. etc.). Because of these trainings, VAs/VSAs sensitized a total of 38,456 smallholder coffee farmers on the ETC approach. To complement the trainings, a total of 6,127 kits were sold for 306,350 coffee trees with Akorion selling 1,207 valued at UGX 124,100,000 for 60,350 trees in three Buikwe, Luwero, and Kanugu districts and KEGRA selling 4,920 kits value at UGX 5.16 million for 246,000 trees in Bushenyi, Ibanda, Mitooma, and Shema districts.

Climate change adaptation activities

CPM supported 42 climate change adaptation champions to participate in a survey and contribute to the development of climate change training materials. The champions formed eight climate change networks to support and synchronize activities within their respective districts. Additionally, the Activity partnered with Ministry of Water and Environment's Directorate of Water Development (which is constructing community valley tanks within the coffee villages) to promote affordable irrigation systems for coffee farmers to mitigate effects of climate change by providing a consistent source of water. The Activity also equipped coffee traders and VAs with knowledge and skills on irrigation, water usage, and maintenance of the irrigation kits. Further, CPM supported middle value chain actors to promote climate change adaptation technologies and behavioral change practices at the smallholder level by implementing activities that enable VAs to access and promote appropriate technologies such as low-cost water storage facilities and drought resistant seed varieties.

Using Information, Education, and Communication (IEC) materials to transfer knowledge to farmers

CPM developed and disseminated 5,895 IEC training materials to support and influence farmers to adopt new technologies and better farming practices. The IEC materials included posters, flyers, booklets, and animations focusing on blended fertilizer for maize, beans, and coffee; the ETC approach; soil testing; safe-use and handling of agro-chemicals; management of the Fall Armyworm; financial literacy; crop insurance; and digital financial services. CPM disseminated the materials to value chain actors and national level stakeholders such as MAAIF for replication. Specifically, to improve smallholder farmers' resilience to climate change and their increase capability for effective utilization of agro-chemicals, CPM developed animation training videos about conservation agriculture and the safe-use and handling in five languages (English, Luganda, Runyankore, Luo, and Runyoro). The videos were disseminated through mobile phones to VAs and traders who in turn, used them to train farmers and create business demand for their services.



IEC materials produced by CPM

IR 1.2 Increased use of high quality agricultural inputs

In partnership with Akorion and traders, CPM rolled out an e-voucher payment system that offers farmers convenient means of ordering and paying for genuine inputs. The system allows for traceability and reconciliation of any input and related production support services that traders extend to farmers. During FY 2017, input sales by CPM-supported intermediaries totaled \$1,365,175. The sales were primarily for seed/coffee seedlings, fertilizers, herbicides, pesticides, and farm implements using innovative models and business acquired as result of CPM mentoring and coaching of intermediaries. The sales were captured with various innovative tools that included the newly introduced village service receipt books which was adopted by 1,230 VAs/VSAs. In addition, the number of farmers acknowledging positive benefits from the accessed inputs increased from 53 percent in FY 2016 to 100 percent in FY 2017, and the number of farmers purchasing inputs from VAs and other promoted models increased from 67 percent in FY 2016 to 88 percent in FY 2017. This increase can be attributed to the various interventions promoted by the Activity to improve the technical and business skill of intermediaries including the use of business record books and the behavior change campaigns.



Input sales by CPM assisted intermediary business

FY 2017	FY 2016
\$1,365,175	\$ 1,391,703

Linking women-led agribusinesses to competitive markets and women beans farmers accessing affordable inputs



Women sorting beans at Kyazanga ACE

To increase support to women-led agribusinesses during FY 2017, CPM linked KDC, Manyakabi ACE, Kyazanga Area Cooperative, Bala Women and Youth Group, and Kitumbi ACE to national, regional, and international beans markets. The linkages led to signing of contracts for beans seed production with three traders (KEGRA, The Edge Trading, and ZAABTA) and two seed companies (Pearl Seeds and Grow More Seeds), valued at UGX 3.2 billion. To support these agribusinesses (and their associated 33,421 women farmers) to fulfill these contracts, CPM facilitated linkages to genuine and affordable inputs for beans seed

multiplication. Through a 70 percent down payment, women farmers accessed affordable, 10-kilogram beans blended fertilizer packages from the off-taker. At harvest, the off-taker deducted 30 percent to recover the farmers' remaining input payment. This win-win arrangement allowed the farmers to access the required inputs to complete the contracts while reducing the risk of potential financial losses faced by the off-takers in "loaning" a portion of inputs to the farmers.

Traders and VAs increasing demand for coffee, maize and beans blended fertilizer

Following the Activity's support to Grain Pulse Ltd. to obtain fertilizer blending equipment between FY 2015 and FY 2016, the company began blending and packaging fertilizers in affordable quantities (10, 25, and 50-kilogram packages) in 2017, to meet smallholder farmer needs. With the fertilizer packaging facility now operational, the Activity partnered with Grain Pulse to train 45 traders and 348 VAs on marketing and business skills to increase the use and proper application of blended, genuine fertilizers among smallholder farmers. As a result, a total of 345 MT of coffee blended fertilizer, 650 MT of maize blended fertilizer, and 109 MT of beans blended fertilizer valued at UGX 2.36 billion was sold. Beyond the coffee, maize, and beans value chains, Grain Pulse sold a total of 492 MT of various fertilizer blends for rice and vegetables.

Promoting adoption of genuine and affordable inputs to increase yields

To facilitate the adoption of genuine and affordable inputs, CPM focused on promoting access to genuine inputs through the VAs. In collaboration with National Coffee Research Institute, Grain Pulse, Akorion, KEGRA, Matayo Coffee Factory, Bisheshe Coffee Processors Association (BICOPA), Kinkizi Development Company (KDC), Katenga Mpangare Coffee Factory, Busano Farmers' Cooperative, Kabeywa United Coffee Farmers, Kabonera Coffee farmers' Cooperative, Kisaky Farmers group and Mitiyana Youth Group, CPM promoted the use of the blended coffee fertilizer through establishment of 80 coffee demonstration sites



A farmer checks to see whether the inputs are genuine before he pays

across Bushenyi, Kanungu, Ibanda, Mbale, Kapchorwa, Mityana, Buikwe and Masaka districts. Further, CPM partnered with the Akorion Company Ltd., NARO, Sasakawa Global 2000, Makerere University, International Institute of Tropical Agriculture/N2Africa Project, Grain Pulse Ltd., and Kali & Salt Fertilizer Company to conduct a promotional campaign to create demand through demonstration sites for maize and beans blended fertilizer in 18 districts. While the use of fertilizer remains low, utilization increased to 23 percent in FY 2017 compared to 18 percent in FY 2016 and a baseline of 9.8 percent in FY 2013. Adoption of genuine seeds among CPM-affiliated smallholder farmers remains high at 88 percent compared to 68 percent in FY 2016 and a baseline of 24 percent in FY 2013.

IR 1.3 Increased access to production support services

Creating more jobs opportunities through Combo services

With the aim of building capacity of new VAs and VSAs, CPM trained 423 new VAs on maize and beans, of whom 55 percent are women (to proactively increase the number of women VAs), on business skills in provision of production and marketing support services (“Combos”) to smallholder farmers. Combo services provided by the VAs/VSAs included digital profiling, soil testing, input sales, planting, weeding, spraying, produce bulking, shelling, digital financial services, and produce drying and cleaning services. In addition, in the coffee value chain, CPM trained 56 new VAs under Great Lakes Company in Kasese District on safe use and handling of agro-chemicals to enable them to provide spraying services to 2,200 smallholder coffee farmers using the ETC model, thereby creating job opportunities for the VAs.

CPM supported VAs and VSAs associated with 18 traders in the western and central regions to create demand for Combo services through a total of 18 roadshows, and by cost-sharing with traders on signage to promote farmer awareness of their services. In collaboration with traders, the Activity conducted a refresher training for 345 VAs on soil testing, crop insurance, business skills, marketing, extension messaging, safe use and handling of agro-chemicals and post-harvest handling. To increase access to production support services, CPM supported the formation of 28 VA associations to facilitate access to finance for business investment in services provision. As a result, 13 of the 28 VA associations formed accessed loans worth UGX 507 million from various financial institutions, and an additional 94,757 farmers accessed better production and marketing services.



A village agent on his way to provide services to farmers in Ziobwe

Public-private partnerships to scale-out proven models for more efficient and sustainable extension delivery services

The 2016 National Agricultural Extension Policy provides for a pluralistic extension services system that engages public- and private-sector actors in the provision of extension services under the coordination of MAAIF’s Directorate of Extension Services. To scale-out and sustain the VA Model, CPM partnered with MAAIF between December 2016 and February 2017 to conduct six regional workshops in Fort Portal, Gulu, Jinja, Masaka, Mbale, and Mbarara to

create awareness on how to integrate the model in extension services, its benefits, and the roles and relationships between the value chain actors. Further, the workshops facilitated the integration of the VA Model into the government's agricultural extension service delivery system and served as platform for district local government (DLG) officials, value chain actors, agro-input dealers, and other implementing partners to collaborate and identify partnership opportunities.

To ensure sustainability of CPM's impacts, CPM collaborated with MAAIF in August 2017 to train 98 sub-county agricultural officers to continue promoting and scaling out the VA Model to additional partners, districts, and value chains. The workshops equipped sub-county agricultural officers with skills for building win-win business relationships and trust; fostering linkages among value chain actors; enforcing the Traders' Code of Conduct; and certifying VAs in accordance with MAAIF's policies and regulations. To further facilitate efficiency in service provision to farmers VAs, and traders, Akorion installed the "Ezy-Agric" application on their smartphones. The application provides a platform where information on inputs, commodity markets, weather, and good agricultural practices can be easily accessed. In addition to enhancing service provision, this public-private partnership will help strengthen traders' associations through encouraging dialogue between traders' and DLG officials and developing enforceable ordinances to guide the regulation of local trade standards.

Public private partnership creates a cadre of crop insurance promoters in rural areas

CPM collaborated with the Uganda Insurers Association (UIA) which includes 14 insurance companies, Ministry of Finance, Planning, and Economic Development (MFPED), Marsh Insurance (an insurance broker), and Akorion to roll out the government-supported agriculture insurance scheme in all four regions to support smallholder farmers with avenues to mitigate the effects of climate change and its impact on food security. As a result, Akorion and Mobipay trained 265 VAs as crop inspectors, who went on to increase awareness of the benefits of insurance among 6,658 farmers, of which 1,834 registered for insurance. In addition, CPM partnered with the Insurance Regulatory Authority to train 1,500 general insurance agents who in turn trained 15,000 rural based insurance agents to mobilize and enroll smallholder farmers and further ease their access to insurance.

Reducing the cost of crop insurance services to smallholder farmers

CPM partnered with key stakeholders providing digital financial services such as United Nations Capital Development Fund, Akorion, Mobipay, and Pegasus (an aggregator) in the development of a digital platform. This platform will enable smallholder farmers to pay for insurance premiums and receive compensation through mobile network operators such as MTN and Airtel Uganda. The platform was designed to allow VAs to monitor farmer gardens on behalf of the insurance companies, lowering the monitoring costs for participating insurance companies and reducing farmer insurance premiums from \$29 to \$16 per acre per season. As a result, Mobipay and Liberty Insurance registered an additional 25,800 maize farmers using the Mobipay mobile payments system in Eastern Uganda for the 2018 season.

To increase production capacity to meet market demand, CPM in collaboration with UGAFODE and Jubilee Insurance created a partnership that was aimed at providing services such as crop insurance (which can be used as collateral in case of a loss) to the Kanungu farming community under KDC, allowing them to access agricultural loans and genuine and affordable inputs.

Credit history and positive credit ratings are imperative for borrowers to be able to borrow money from financial institutions. To this end, CPM collaborated with Amarin Financial Group and facilitated linkages to financial intuitions among traders to build their credit readiness through training and cost-sharing. As a result, traders supported by CPM accessed loans valued at \$1,206,128 during the reporting period. These beneficiaries included Kasaijja Coffee Factory and BICOPA who accessed production loans worth \$108,760 from Centenary Bank and FINCA Uganda. In addition, through linkages with other financial institutions, four CPM-affiliated traders (Arise & Shine, Namungalwe ACE, Bukusu ACE, and TAABU) accessed a total of \$811,699 in production and trade loans from Uganda Development Bank.

To increase traders' capital base, CPM collaborated with DFCU Bank on new financial products to strengthen the agri-business value chains. Specifically, DFCU introduced the benefits and requirements of a new unsecured overdraft product for traders due to increased demand for trade finance, which was more affordable than the commercial products offered previously. The unsecured overdraft product of UGX 50M for a duration of 3 months was developed to support traders meet their supply contracts on time. As a result, more than 60 traders were linked to DFCU for loan assessments. Two of the first clients to benefit from the product were ZAABTA, which received a loan worth approximately \$14,000, and Butiiko II, which received a loan worth approximately \$29,000 for crop trade finance.

Building a foundation for agency banking to thrive in rural areas

In collaboration with DFCU Bank, CPM promoted a new product called "Agency Banking" that is designed to provide financing options for intermediaries who work with individual and farmer groups for easier access to loans. The product uses the existing VA network to reach farmers, saving them time and resources spent travelling to actual bank locations to complete loan application processes. To promote this approach, CPM worked with Amarin Financial Group's VA network training 105 VAs on financial literacy and how to create awareness about agency banking opportunities among smallholder farmers. As a result, Mobipay in partnership with DFCU selected 50 of the trained VAs and continued to build their capacity in Agency Banking.

Supporting micro, small, and medium enterprises (MSMEs) to unlock agricultural-related credit

The Activity partnered with UGACOF LTD through Amarin Financial Group to provide basic training to 14 farmer organizations with a combined membership of 5,600 farmers in the central and eastern regions. Training topics included governance, business planning, financial management, and bookkeeping. A total of 173 cooperative leaders participated in the training and 14 cooperatives (depot committees) under UGACOF registered for business plan development. Furthermore, during the reporting period, under a 50/50 cost-sharing arrangement with traders, CPM supported Amarin Financial Group to develop and submit 10 funding proposals to aBi-Trust for KEGRA, New Kakinga Millers, Green Farm Africa, Kagango, BICOPA, Katerera ACE, Kiima Foods, Kigarama Commodity Cooperative Society, Coffee World Ltd., and Kabonera Coffee Farmers' Cooperative to help them invest in their businesses.

To promote gender inclusion, CPM integrated an adult literacy and numeracy program within women-led groups and associations to enable women to leverage credit. CPM also developed

and disseminated financial literacy posters to train value chain actors in savings and investment. In addition, CPM partnered with Finance Trust Bank, UGAFODE Microfinance Limited, and Amarin Financial Group to support interventions focused on increasing participation of women and youth groups (especially girl youth groups) in the bank's training on business skills, bookkeeping, and financial literacy benefitting 460 potential clients (including 10 SMEs, 150 microenterprises, and 300 individual girls). As of the conclusion of this reporting period, CPM had assisted a total of 525 MSMEs to receive agricultural-related credit.

Leveraging private-sector investment to support smallholder farmers

The Activity collaborated with Ag BioTech, an input dealer based in the United States, to introduce bio-fertilizers targeting smallholder farmers to sustainably maximize their productivity. Working through Keith Associates (a Ugandan company dealing in agro-inputs), Ag Biotech provided sample products of Vitazyme (a bio-stimulant for soil organisms) and Bio-seed (a natural product for shielding seeds from infections while inoculating crops with beneficial bacteria) for trials as part of the registration process to allow the product to be officially released in Uganda. The samples were submitted to NARO for testing. CPM also selected a few partners (Akorion, ZAABTA, Pearl Seeds) and a few individual farmers to conduct parallel trials in various regions. The trials are ongoing throughout Season B 2017, but preliminary results on maize and beans showed improved germination vigor and promising results on coffee.

CPM also supported WorldCover, a U.S. based investor and agricultural microinsurance company, to assess the market for crop insurance opportunities. Specifically, CPM provided substantial information about the insurance industry and market and coordinated linkages to other USAID supported partners including MFPED, Insurance Regulatory Authority, Uganda Insurance Association, insurance companies, traders and farmers.

WorldCover plans to develop a tailored insurance product that will suit the unique needs of smallholder farmers in reducing risk. The WorldCover platform will protect farmers from natural disasters while providing investors with superior returns and an opportunity to make direct social impact. This product will mainly address drought, which is an ongoing threat to smallholder farmers across Uganda, 90 percent of whom do not have access to crop insurance. This product will enable farmers to take on risky but profitable investments while increasing farmers' attractiveness to financial institutions.

During the reporting period, CPM-affiliated clients invested \$7.14 million in production and crop conditioning equipment such as planters, tractors, hullers, solar dryers, and storage facilities. To address maintenance challenges and ensure the long-term sustainability of the promoted innovations, CPM collaborated with Munyegera Agro-machinery to train 53 equipment operators from Muhito Coffee Factory, Kagongi Coffee Factory, Tweyanze Coffee Factory, Nkoma ACE, Manyakabi ACE, and Kamwenge Tukulerehamwe Farmers' Group in the operation and maintenance of the equipment.

Partnering with private-sector to integrate health, nutrition, and sanitation support services into the VA Model

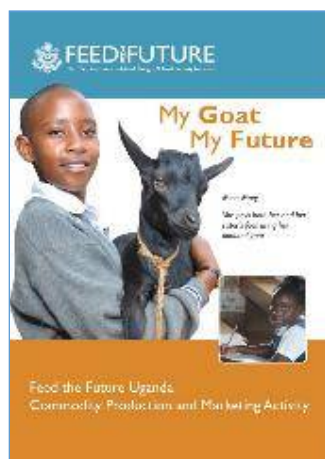
CPM partnered with Crestank to train 18 traders and 28 VAs in western Uganda on the integration of health, nutrition, and sanitation support services into the VA Model. The training involved coaching traders and VAs on how to train farmers on aspects of the "AquaSanTec's

One Stop Smallholder Package” a concept developed by Crestank for water, bioslurry, biogas, drip fertigation, grain storage, and safe sanitation equipment that improves access to clean water and overall health, nutrition, and sanitation of smallholder farmers. The training equipped participants with skills to install and maintain the equipment as well as marketing skills to generate demand for the equipment. By working through CPM-affiliated traders and VAs, Crestank generated sales worth UGX 130 million from the western region. The most popular items sold were the AquaSanTec indoor household sanitation solution which promotes safe urine and feces disposal, and the BlueFlame BioSlurriGaz equipment that generates clean energy for cooking from cow dung and water, with the byproduct “slurry” used to fertilize “kitchen garden” vegetables.

Improving nutrition at the household level using business models

Improved nutrition is partly responsible for development of a vibrant and productive workforce. In the past, efforts to promote production and productivity was hampered by ailments attributed to lack of adequate nutrition and feeding regimes. To promote good nutrition practices throughout the target value chains, CPM identified and promoted nutritious bean varieties, especially those rich in iron, by training traders and VAs. Through the training, traders were also empowered to promote diversification of production to include other nutritious crops such as fruits and vegetables. For example, ZAABTA has promoted production of fruits and vegetables among farmers as means to boost farmer health in the districts of Luwero, Wakiso and Mukono. The promotion of the additional crops not only improved the nutrition element among farmers, but also resulted in additional income for VAs, especially women.

“Mary had a little goat” approach – promoting girls’ education



A poster to promote education for the "14-year" old girl

To align CPM’s gender programming with the USAID/Uganda Mission’s emphasis on reaching the 14-year-old girl, CPM has encouraged adoption of the “*Mary had a little goat*” approach through which CPM works with affiliated traders and off-takers to promote and establish goat-rearing businesses as an additional source of income for investing in girls’ education. The girls’ parents act as “co-farmers” to manage the goats when the girls are at school. The trader-linked VAs, already serving and buying maize, beans, and coffee from those farmer-parents, are trained to implement the initiative. The VAs also partner with district veterinary services to then train the girls and their parents in goat rearing best practices and offer access to other needed extension, financial, and market services. The effort exposes girls to future on-farm economic opportunities, provides real-life application of skills they learn in school (e.g. reading, math), and places their parents in a mentorship role.

One champion of the *Mary had a little goat approach* is KDC, based in Kanungu District. During the reporting period, KDC registered 738 girls who have acquired more than 2,000 goats from coffee, maize, and beans farming proceeds. Through partnerships with BDS companies such as Amarin Financial Group, farmer group leaders were trained on financial and business skills to enable them to manage the goats on a commercial basis. As a result, the farmer groups were linked to financial institutions such as UGACOF and Jubilee Insurance to

receive finance and insurance services respectively. To streamline the marketing of their goats, CPM linked KDC to goat export markets in the Middle East and KDC is currently working directly with exporters to ensure that the goats meet export market requirements.

SECTION IV: INTERMEDIATE RESULT 2.0 INCREASED ACCESS TO COMPETITIVE MARKETS

Under this intermediate result, CPM and its partners apply innovative methods to increase farmer's access to market support services and rewarding markets. In FY 2017, the Activity continued to develop and strengthen vertical and horizontal linkages with partners to improve market linkages and increase partners' access to market support services, as well as to improve post-harvest handling. Notable interventions include use of ICT mobile apps such as Ezy-agric that provides market information using smartphones and exposing farmers to new innovations in PHH such as the flat-bed sun dryer, using IEC materials to train intermediaries on PHH, and training intermediaries on business development and proper record keeping. Furthermore, the Activity worked with public and private sector partners such as UCDA and coffee associations to create awareness on good coffee quality standards. Key achievements in improved market linkages are highlighted below.

FY 2017 Key Highlights and Achievements



255,491 new farmers supported by intermediaries to access better post-harvest support services.



Volume of trade (\$ million)

Coffee	171,178,239
Maize	206,425,202
Beans	26,239,649



434,797 farmers accessing 254 marketing unit structures managed by traders and VAs.

\$ 9,398,034 additional trade finance funds injected by Activity-supported intermediaries.

\$ 26,296,925 value of agricultural and rural loans as a result of USG assistance.

\$68 million value of new trade accessed by 329,831 maize and beans farmers.

IR 2.1 Improved market linkages

In FY 2017, CPM focused on fostering linkages between producers and the rest of the value chain to improve market system functionality by facilitating end buyer-traders to scale up and move into new areas, as well as approaching new end buyers to gauge interest and provide advice. As a result, intermediaries supported farmers to improve market linkages by investing in post-harvest labor saving technology to improve product quality and timely delivery through better market information sharing.

125 labour-saving technologies sold

255,491 farmers accessing labour-saving technologies

74,757 farmers received market information

Connecting women entrepreneurs to national and regional markets

With the aim of increasing support to female entrepreneurs by linking them to national, regional and international markets, CPM facilitated private sector partnerships that increased cross-border trading for seven women-led entrepreneurs. The clients, Manyakabi ACE, Bukinda Beans Growers, KDC, Kyazanga ACE, TAABU, and Bala Women and Youth Group, engaged in bean production and acquired trade contracts worth \$1.95 million with Betta Grains Kenya Ltd. As a result, Bukinda Bean Growers Cooperative Society and Manyakabi ACE supplied 264 MT of quality exportable beans to Betta Grains Kenya Ltd. In addition, CPM facilitated a two-day business-to-business trip for 24 women entrepreneurs from KDC to three major grain exporting companies, including Savannah Commodities, Joseph Initiative and Grow More Seeds, with the aim of building networks and promoting mentoring opportunities.

Improving smallholder's farmer's access to rewarding markets

In FY 2017, CPM collaborated with WFP to enhance their 23 satellite collection points (SCPs) and their smallholder procurement program while simultaneously facilitating local market



A trader in Mubende loading maize for export

linkages and business opportunities for a variety of CPM-supported traders. CPM linked 28 farmer organizations to WFP's smallholder procurement program resulting in the improvement of farm-gate prices as well as farmers being assured of a reliable market. In addition, CPM's partnership with WFP and Farm Uganda resulted in 17 traders signing supply contracts with 19 of 23 SCPs with a total membership of 43,023 farmers, to purchase 34,000 MT of maize and beans. Additionally, CPM-supported traders participated in a training of trainers for maize grain and dry beans export

procedures and standards organized by EEA. As a result of the training, 20 traders signed contracts with Kenya-based Njeru Cannery for 12,000 MT of beans and Grain Link Eldoret for 28,000 MT of Grade 2 maize. Further, CPM partnered with PXA (a global business-to-business commodity trading company that operates a platform of over 100 international and regional

traders), to link 72 maize and beans traders to potential regional and international markets. To further promote local markets for grain, CPM supported Akorion to train and equip 158 youth VAs (72 female and 86 male) on a new marketing mobile phone application called “Ezy-marketing” which aggregates demand and supply data for more than 60,000 smallholder farmers. In FY 2017, 163 traders and 37 exporters traded a total of 1,513,785 MT of maize, beans, and coffee from 434,979 smallholder farmers compared to FY 2016 where 314,848 MT was exported. The increment in FY 2017 exports is a result of introducing the buying and delivery book to traders, an innovation the Activity introduced to help them capture trade information.

IR 2.2 Improved access to market support services

CPM facilitated an efficient business ecosystem that harnesses the private sector to improve market support services and improve access to cash or credit to facilitate business transactions. CPM supported the formation and growth of various VA and VSA associations to enable them to strengthen the supply chain from farmers to the market. CPM partners such as Akorion, Mobilepay, and FarmGain are using various platforms to communicate market information to farmers through intermediaries using smartphones and unstructured supplementary service data (USSD), which enables price transparency and builds better relationships amongst intermediaries and farmers.

Formation of traders’ and village agent associations

During the reporting period, CPM facilitated the formation of district and regional traders and VA associations, including five district traders’ associations (Kasese, Isingiro, Kamwenge, Kabale, and Ibanda) and five sub-regional traders’ associations (Lango, Acholi, Bugisu, Busoga, and Kigezi). Traders’ associations are a key entry-point to facilitate and improve relationships among value chain actors and with government institutions and give traders the platform to influence policies that affect their businesses (i.e. taxes, tariffs, permits, subsidies, etc.). More specifically, traders’ associations will 1) support the enforcement of the *Traders’ Code of Conduct* not only for transactions among association members but for transactions with all other market system actors; 2) facilitate investment and provision of improved output markets for smallholder farmers selling commodities through improved market channels; 3) improve linkages between associations and government-oriented market information services to improve the accuracy of information shared and expedite the flow of information; 4) facilitate improved access to finance through co-guarantees in loan applications; and 5) enable participation in formulation of government policies. Recommendations related to traders’ associations that were identified during CPM’s regional closeout dialogues can be found in Section VI.

“Better than Cash” initiative

In order to reduce costs, intermediaries exhibited a willingness to invest in the rollout of mobile payments in rural areas where traditional mobile money and commercial finance models are not economically viable. CPM’s “Better than Cash” initiative was developed in partnership with 23 traders and two ICT companies (Mobipay and Akorion) to promote and educate the farming and trading communities on the use of mobile payments with aim of eliminating or reducing the administrative, record keeping, security risks, and other costs involved in using obsolete cash payment schemes while simultaneously establishing a closer relationship with their farmers. To support efficient loan repayment using ICT technologies, in collaboration

with Mobipay and Agro Systems, CPM promoted and installed digital weighing scales at three ACEs, including Twezimbe ACE, Bugaya ACE, and ZAABTA. The digital weighing scale links farmers' sales of produce to an automatic e-payment system within the farmers' mobile wallets. This approach is relatively new to Uganda and provides a unique programmable tolerance and advanced features that are useful in monitoring of loan payment recovery with the respective financial institutions. Because of its transparency, it has developed financing options that support intermediaries to provide smallholder farmers with production credit. The platform has increased business efficiency, financial services providers, and farmers through the provision of information.



In addition, VAs utilizing Akorion's "Ezy-Agric" mobile application increasingly ordered inputs using mobile money. During the reporting period, a total of 46,170 e-payment transactions were completed by value chain actors because of the CPM's "Better than Cash" initiative. Seventy percent of these transactions were payments for farmers' produce, while the remaining 30 percent were from VAs ordering inputs.

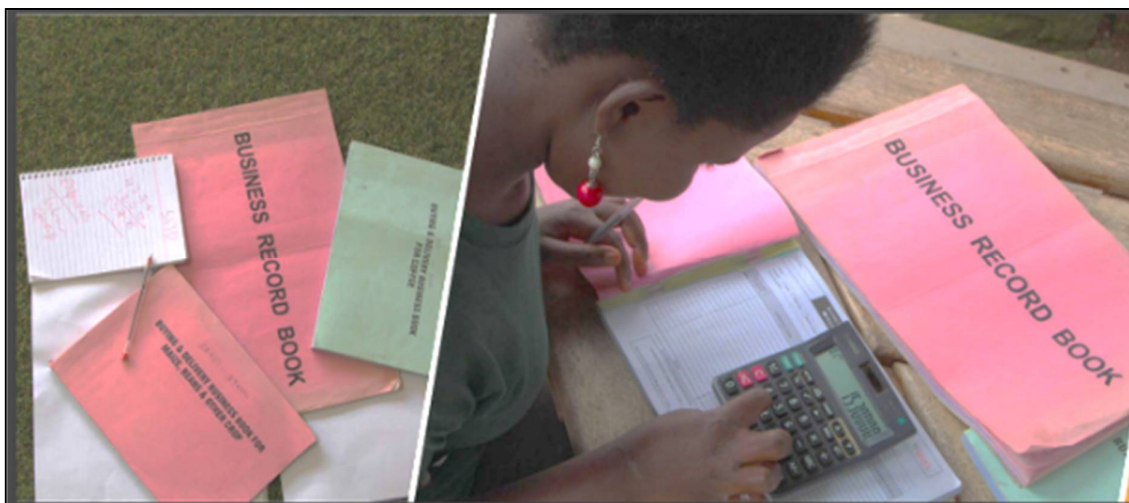
Number of e-payments	
FY 2017	FY 2016
46,170	14,910

Harnessing business collaborations to strengthen value chains

To sustain results once CPM concludes in March 2018, CPM partnered with Akorion to train 273 group leaders from 20 SCPs on the VA model to improve the commodity supply chains that support the SCPs. Akorion also signed a service delivery contract with the SCPs to extend production services to their farmers. Additionally, CPM collaborated with Amarin Financial Group, Akorion, Joseph Initiative, and New Kakinga Millers to train 70 WFP SCP group leaders in record keeping, business skills, and post-harvest handling. CPM participated in a technical working group organized by the Uganda Warehouse Receipts Authority, UNBS, and EEA to develop awareness materials for warehouse standards. The technical working group also developed simplified versions of the materials for warehousing and warehouse standards of bagged cereals and pulses that were pretested, and gazetted in June 2016 under the stewardship of UNBS. The materials developed will be used by intermediaries to improve their crop conditioning and storage at their bulking center but also support them to offer better crop conditioning facilities to smallholder farmers who want to utilize the warehouse receipt systems (WRS).

Formalizing intermediary transaction records

CPM also introduced the buying and delivery business book to facilitate record keeping as a good management practice among traders and VAs. Proper record management helped traders and partners to improve tax compliance and enabled them to meet financial institution prerequisites for accessing finance. The buying and delivery business book is used to record daily transactions and the information helps potential business partners to assess the intermediary's business performance and practices. CPM trained 509 intermediaries on how to utilize the book and facilitated buy-in through a cost-share mechanism which resulted in intermediaries buying 1,569 books. Each of these books will record traded volumes worth approximately \$75,000 for coffee and \$35,000 for grain when fully utilized. This allows the users to track the volumes and value of their businesses with the aim of using this information for financial access, tax and measure their business growth.



A trader using the business record book

IR 2.3 Improved post-harvest handling

Under this sub-component, CPM focused on scaling out proven technologies to strengthen and develop competitive marketing strategies so that Uganda's products reach local, regional, and international markets. Emphasis was on the synergy between quality enhancement and increasing productivity to ensure sustainable development of the sector. Interventions also focus on improving post-harvest handling and crop conditioning at the farm, village agent/village service agent, and trader levels.

Increasing access to markets through improved storage and post-harvest handling practices



A Village Agent in Mubende displaying PHH silos that she sells to farmers

To improve farmers' access to competitive markets, CPM collaborated with Akorion to train 110 VAs from Rugendabara ACE, Karu Development, Joseph Initiative, Kamwenge Tukorerehamwe, BICOPA, New Kakinga Millers, Kigarama Cooperative, Bukinda Women's Group, Green Farm Africa, and KDC on storage improvement techniques such as crop conditioning at household and aggregation centers that reduce post-harvest losses from moisture and pests as well as mitigate the threat of aflatoxins. As a result, 87,320 farmers subsequently received training from VAs and 8,208 household silos were sold to smallholder farmers by Akorion and Crestank Uganda. Related (and also through Akorion), Kagango Coffee Farmers Association, KEGRA, BICOPA, and Sanyu Investment acquired silos valued at UGX 2.38 million to improve grain storage at the household level. Finally, CPM supported New Kakinga Millers, Bukusu ACE, Masaba RPO, Bugiri Agri-business Initiative Development Association (BAIDA), and Upland Rice Millers to attend a training on detection, testing, and control of aflatoxin organized by the Eastern Africa Grain Council in Jinja.

Bringing mobile coffee hulling/pulping services to smallholder farmers to improve coffee quality and reduce post-harvest losses

CPM supported Munyegera Agro-machinery to fabricate two new innovations in coffee post-harvest handling. This includes a bicycle-powered mobile coffee pulper called the “*Mutindo Pulper Bike*” which can process 200 kilograms of wet coffee berries per hour, a tremendous increase in productivity compared to the hand-operated pulper which can only process 50 kilograms of berries per hour. CPM also supported fabrication of a mobile coffee huller, which can process 300 kilograms of dry coffee per hour. Both innovations bring pulping and hulling services directly to the farmers’ location and reduce post-harvest



Munyegera testing the “Mutindo” coffee pulper

losses. These innovations also allow farmers to use the husks to mulch their coffee gardens and for cooking fuel. Moreover, these innovations create job opportunities for youth. For example, Bisheshe Coffee Processors Association and Matayo Coffee Factory acquired four mobile coffee hullers on a cost-share basis (with the clients investing UGX 14 million), which has given coffee hulling service employment opportunities to eight VAs. Additionally, 11 traders have expressed interest in acquiring 222 *Mutindo Pulper Bikes* with eight bikes sold to date. KDC in partnership with Post Bank is also planning to procure 200 *Mutindo Pulper Bikes* for women groups in Kanungu District to improve the quality of the farmers’ coffee and enable them to earn more money.

Understanding maize fortification in Uganda

To support GOU’s food fortification policy for maize flour (which mandates that maize flour processors milling more than 20 MT/day must fortify their flour), CPM partnered with the USAID/SPRING Project, the Uganda National Bureau of Standards (UNBS), the National Drug Authority, and the Private Sector Foundation to train 20 maize processors and traders on recommended procedures for food fortification. The training covered good manufacturing practices, food fortification, usage of fortification equipment, and the advantages to both processors and consumers. Upon completion of the training, 20 millers agreed to form a millers’ association for advocacy, networking, and implementation processes. To date, Manyakabi ACE has acquired food fortification equipment and awaits installation and more capacity building on maintenance while Kakinga Millers is already upgrading its facilities and equipment to meet the required standards for food fortification.

Private sector investment in labor-saving technologies for improved post-harvest handling

During the period, CPM supported many traders on a cost-share basis to obtain labor-saving technologies from Munyegera Agro-machinery to increase farmers’ access to improved and affordable post-harvest handling services. The Activity supported Tweyanze Coffee Factory, Kagongi Coffee Factory, Muhito Coffee, and Manyakabi ACE to acquire eight mobile combined coffee hullers under the cost share arrangement; Nutrimix, TAABU, and Manyakabi ACE to obtain bean threshers; and Nkoma Area Cooperative Enterprise and Nutrimix to

acquired four mobile maize shellers. These traders invested UGX 69,000,000 combined to acquire the above-mentioned equipment. To date, supporting these traders to obtain these technologies have created job opportunities for more than 80 youth VSAs.

In the coffee value chain, CPM collaborated with Great Lakes Coffee (GLC) to support nine coffee processors from the Mt. Rwenzori region in western Uganda to invest in basic post-harvest quality assessment equipment. Specifically, CPM and GLC cost-shared on 11 weighing scales, 10 moisture meters, and 9 digital weighing scales which enable their smallholder coffee farmers to realize better and differentiated payments for higher quality coffee.

SECTION V: INSTITUTIONAL CAPACITY DEVELOPMENT

Capacity building for grantees

In FY 2017, CPM utilized the Organizational Capacity Assessment Tool (OCAT) developed in FY 2016 to assess Amarin Financial Group and Rubanga Cooperative Society in strategic planning, human resource management, financial management, performance management, and programmatic reporting. The assessments were carried out by CPM's Strategic Activities Fund Manager in collaboration with leadership from each grantee. As a result of the assessments and ongoing support to the grantees, the following improvements have been made to date:

- Amarin Financial Group developed and finalized finance and operations manuals, and trained and disseminated these manuals to all staff.
- Rubanga Cooperative Society installed a computerized accounting system, trained accounting staff on using the system, and established operational controls to complement the new system.

During the reporting period, CPM conducted grant closeout procedures to officially close the grants program. Eleven out of the Activity's fourteen grants were officially closed utilizing a completion certificate and as applicable, a deed of donation for equipment received through in-kind donations. The remaining three grants will be officially closed during FY 2018 Quarter 1.

SECTION VI: COMMUNICATIONS

Public Relations and Communications

Regional closeout dialogues

As a part of its Transition and Sustainability Plan, CPM conducted two out of four planned regional closeout dialogues in Quarter 4 of FY 2017. The purpose of the dialogues was to facilitate the transfer of relationships established and knowledge acquired during implementation to key public- and private-sector stakeholders and other development partners. More specifically, the dialogues were designed to facilitate additional learning, share experience, identify opportunities for engagement/collaboration, and create awareness about replicable interventions. Each dialogue began with one day of site visits to a combination of champion traders, processors, and VAs and concluded on the second day with a round-table

discussion to: 1) ensure a shared understanding and ownership of the approaches and tools necessary to sustain impact; 2) discuss challenges, gaps, and opportunities; and 3) agree on the way forward and secure commitments from partners.

To ensure an effective transition, a variety of partners participated in each dialogue including but not limited to: farmers, VAs, traders, processors, exporters, USAID representatives, implementing partner representatives from USAID-funded activities (e.g. Harvest Plus, Farmer to Farmer, and Feed the Future Uganda Youth Leadership for Agriculture), business development service providers such as Amarin Financial Group, insurance companies such as UAP, financial institutions including aBi Trust and Centenary Bank, agro-chemical and seed companies, information and communication technologies (ICT) companies such as Akorion, labor-saving technology fabricators, DLG and MAAIF representatives, and World Food Programme representatives.

During the site visits and roundtable discussions, participants shared experiences, lessons learned, challenges, and recommendations to ensure sustainability of CPM interventions. Key challenges identified during the dialogues included:

- Low productivity at farm level.
- Limited access to finance and improving value addition
- A large number of the traders do not have official business plans and thus, it is challenging for them to access financial services.
- Limited access to agro-inputs coupled with increased fake inputs on the market.
- Poor storage facilities.
- Limited coordination among value chain value actors.
- Negative attitude of government towards traders.
- Inflexibility in promoting varying standards.
- Political and budget pressures.
- Weak laws/limited implementation of by-laws/ordinances.

Key recommendations included:

- Foster public-private partnership investments focusing on increasing on-farm productivity by ensuring access to affordable technologies, mechanization, improved delivery of extension services, inputs.
- Government should bridge the gap between policy formulation and policy implementation by scaling-out market-driven approaches such as the VA Model to reach more smallholder farmers.
- Farmers' organizations should take advantage of WFP markets following the change in WFP's purchasing structure to a procurement program which purchases produce directly from farmers groups.
- Provide further support to initiatives that promote value addition to increase competitiveness at local and regional levels.
- Formation and strengthening of traders' associations is key to sustaining CPM interventions.
- The VA Model should be scaled-out in all sectors since it reduces the ratio of service providers to clients.

- Enhance linkages between associations and government market information services in order to improve and speed-up the flow and accuracy of information between the two entities.
- Government intervention is required to buy-down risk in agricultural lending under agricultural finance options.
- To increase uptake of agriculture insurance, the government and private-sector should continue investing in awareness, promotional, and communication activities.

Given the recent formation five district and five sub-regional traders' associations, and the fact that traders' associations were identified as key to sustaining CPM interventions, many valuable recommendations were proposed during the dialogues related to strengthening existing associations and forming new associations. Overall, association members should identify their own areas of weakness and how to strengthen them, as well as possible new initiatives to benefit their members. Suggested activities include:

- Conduct a needs assessment and provide services that members expect from the association.
- Identify possible implications of existing and proposed national policies on members.
- Establish and enforce the Traders Code of Conduct including relationships with farmers and other traders at different stages of the marketing chain.
- Consider how they could play an increased role in providing training to village agents and farmers.
- Issue identity cards to members.
- Promote crop and goods insurance for members' produce while in transit.
- Organize joint transportation for members' produce.
- Support female traders through provision of services such as childcare facilities and establish policies to curb harassment.
- Provide marketing and supply information in user friendly formats to members where possible, using modern information and communications technologies.

For government and donors, overall, they should recognize the important role played by traders in the market system. The dialogues made it clear that the prevailing hostility towards traders by government and donors (from the misperception that *all* traders exploit farmers) needs to be addressed. The hostility results in traders' exclusion from key policy processes and in addressing issues that impact farmers and traders alike. To encourage further participation and address the misconception, the following the following recommendations were proposed during the dialogues:

- Encourage traders to establish associations where none exist. Care should be taken not to impose associations as a part of a top-down approach but to alert unrepresented traders on the potential advantages of being organized.
- Provide business management, business plan development, bookkeeping, contract negotiation, compliance, preparation of loan applications, storage, handling of produce, and specific training related to compliance with national laws (e.g. labor laws).
- Work with associations to identify training requirements of their members and provide appropriate training to ensure quality and adherence to standards.

- Provide training to association committee members and staff in areas such as negotiation and advocacy.
- Consider the potential of associations to mobilize traders for the purpose of market development, opening communication channels, and fostering dialogue.
- Incorporate associations along with other interest groups in decision-making by formally allocating positions on relevant government committees.
- Avoid unfounded criticism of traders and work with existing associations to resolve problems of mutual concern.
- Clearly identify appropriate channels for traders to communicate with government. It is often unclear whether government regards markets and marketing as being the responsibility of the Ministry of Trade Industry and Cooperatives or MAAIF.
- Educate associations on the potential role of national apex organizations as channels for policy discussions with government.
- Provide structured assistance towards the establishment of apex umbrella organizations. It is important that apex associations be established as a result of member associations seeing a genuine need for them and not as a way of getting access to donor resources.
- Provide basic training in arbitration and dispute resolution techniques within the association and externally.

Finally, it was identified that many traders are unsure of tax compliance and URA processes. Thus, it was recommended that considerable care be taken to ensure that traders fully-understand importance of tax compliance and how their businesses could be impacted if they do not comply (i.e. severe URA penalties, rejected loan applications). This could be achieved through tax education activities with URA and traders' association leaders.

Developing tested and proven approaches and tools for sustainability

Following CPM's Transition and Sustainability plan, the Activity continued to develop and refine seven approaches and four tools that will enable public-and private-sector stakeholders, USAID, and other IPs to sustain impact and inform scale-out. The seven approaches for sustainability include:

- Stimulating private sector service delivery through the VA model;
- Digitizing agriculture production and services to smallholder farmers;
- Promoting "Combo" service delivery to improve agriculture services and create job opportunities;
- Increasing coffee productivity under "Every Tree Counts";
- Delivering affordable business development services;
- Promoting girls' education through "Mary had a little Goat"; and
- Promoting youth-led commercial agriculture.

Tools include the *Village Agent Model Implementation Guide*, *Frequently Asked Questions on the Village Agent Model*, *Trader Code of Conduct*, and *Trader Profile Book*. Overviews of the approaches and tools can be found in CPM's final Transition and Sustainability Plan. The final approaches and tools will be disseminated before CPM's Final Closeout Workshop in February 2018.

Using "edutainment" to promote behavioral change among coffee, maize, and beans value chain actors

CPM developed, produced, and implemented a Behavioral Change Communications Campaign (with subcontractor Nomad Advertising Ltd.) on GAPs, good PHH practices, and CPM-promoted services and innovations. A total of 13 one-hour weekly radio programs were aired in Luganda and Runyankore on three radio stations (Buddu FM in Masaka District, Link FM in Mbarara District, and Bushenyi FM in Bushenyi District). The “Twezimbe” program (meaning “let us build each other” in Luganda), was aired every Monday between 11:00am and 12:00pm on Buddu FM; the “Obuhingi n’Oburiisa” program (meaning farming in Runyankore), was aired every Friday between 7:00pm and 9:00pm on Bushenyi FM; while the “Yeyombeke” program (meaning let us build each other in Runyankore), was aired every Wednesday between 2:00pm and 4:00pm on Link FM. The third radio station, Link FM aired it free of charge which was negotiated by the subcontractor, Nomad Advertising Ltd.

The campaign used interactive “edutainment” dramas to captivate listeners and a panel led by subject matter experts (agricultural officers, private-sector partners, CPM-staff members, etc.) to equip farmers with the relevant information and to discuss issues affecting farmers. The drama series mirrored the everyday lives of smallholder farmers. Private sector partners such as Brazafric, Grow More Seeds, and Grain Pulse contributed prizes which were given out to listeners of the programme after answering a quiz.

Enhancing access to market information through ICT

CPM continued to implement activities to popularize the use of ICT platforms to enhance access to market information and facilitate business transactions, strengthen inter-actor relationships for more effective movement of products, provision of support services, and the sharing of information between buyers and sellers. In collaboration with Akorion, CPM promoted the “Ezy-Agric” application which provides production and marketing information to traders, VAs, and farmers, and uploaded production animation videos to VA smartphones.



A farmer using a mobile phone to connect to link to buyers

Donor Relations

On April 11, 2017, CPM facilitated a roundtable discussion with U.S. Ambassador to Uganda



The US Ambassador, Deborah Malac listening to a farmer during the roundtable meeting

Deborah Malac, USAID/Uganda’s Office of Economic Growth Director Sheila Desai, and twelve CPM-affiliated clients (five traders, three VAs, and four farmers). The roundtable aimed to identify approaches that can be scaled and to identify existing challenges that can be addressed (with support from the government and donors) to stimulate further development in the agriculture sector. During the interactions, the Ambassador asked the participants to suggest ways in which what has been done can be kept going, with or without USG support, suggest other ways the government and partners can support agriculture as well as

identify any gaps that can be addressed to improve agriculture. Participants noted that successes can be replicated/kept going by providing information and training to farmers and also through changing the mindset of farmers from expecting free things/handouts to embracing farming as a business. To ensure ownership and accountability, clients highlighted the need to scale-out interventions based on cost-sharing arrangements rather than government and/or donor “handouts” that foster dependency. Participants also noted that farmers can always contribute in-kind resources such as land and labor towards development initiatives.

Monitoring for Results

CPM subcontracted Research World International to conduct two surveys on farmer adoption of CPM-promoted practices in the 34 Feed the Future Uganda districts across all four regions. The behavioral change survey followed the same respondents under the selected traders or farmer organizations over time. CPM conducted a midline survey to assess adoption of the Activity interventions and innovations. Key findings are as follows:

- Farmers have adopted the use of quality inputs, GAP, and PHH services. The most commonly adopted GAPs include timely planting, weeding, pruning/thinning, and proper spacing (all reported by more than 90% of farmers); use of improved seed varieties (86.7%); and timely harvesting (89.1%). The least adopted practice was irrigation (34.6%). The level of adoption of GAPs is generally uniform across the regions. For PHH, the most commonly adopted practices were shelling/threshing (49.7%), grain cleaning (32.8%), and storage and fumigation (31%).
- Farmers are paying for embedded services provided by middle value chain actors. The most accessed and paid for service was spraying of pesticides, reported by 46.7% by the farmers surveyed.
- Farmers are using market information to price their produce and improve their practices. Nearly half (47.8%) of farmers based produce pricing on prevailing local or international market prices, while 24.5% based pricing on the market demand for the type of grain or coffee offered. This highlights the extent to which farmers used market information to inform their pricing decisions.
- Farmers are accessing and using loans. 57% of farmers surveyed had accessed production loans in the form of cash or agro-inputs. The central region exhibited the highest level of access at 61.8%, while the north had the lowest level of access at 46.3%. The primary sources of farmers’ credit were formal bank, micro-finance institutions and/or savings and credit cooperatives (29.2%), traders attached to VAs (27.1%), and directly from VAs (10.7%).

SECTION VII: COLLABORATING, LEARNING, AND ADAPATING

CPM has consistently used the CLA methodology to adjust its implementation approach. As a result, the Activity has significantly transformed its operational structure and mentored staff to go beyond a simple value chain approach to include a more expansive facilitative market system approach to value chain development. Integrating CLA principles into implementation helps to ensure that our interventions are coordinated with other partners in the sector, as well as grounded in strong evidence base. During FY 2017, CPM continued to integrate CLA principles into all interventions. To ensure sustainability of CPM interventions and impacts

beyond the Activity's March 2018 end date, special emphasis was placed on transitioning key relationships, knowledge, and tools to public- and private-sector partners throughout the reporting period. Key collaborating, learning, and adapting activities are as follows.

Collaboration

CPM collaborated with the MAAIF Agricultural Extension department to facilitate linkages to existing government extension workers and integrate the VA model into the government extension system. Furthermore, to ensure long-term sustainability of CPM interventions, the Activity worked with MAAIF to train 98 sub-county agricultural officers on implementing and scaling-out the VA Model. The Activity held four, two-day workshops in the Central, Eastern, Northern, and Western regions. CPM continued its collaboration with other implementing partners and Feed the Future Activities in Uganda, such as the USAID/SPRING Project on food fortification, as well as AIA to produce IEC materials for safe use and handling of agro-chemicals and VA trainings.

In collaboration with traders, VAs, the Ministry of Trade, Industry and Cooperatives, DLGs, ULGA, Uganda National Farmers' Federation, and the Uganda Cooperative Alliance, CPM facilitated the formulation of the *Traders' Code of Conduct*. The *Code of Conduct* will:

- Enable traders to form associations;
- Enable the Ministry to issue association certificates of registration;
- Give DLGs the tools to monitor and regulate traders;
- Promote self-regulation among traders;
- Improve trust and transparency between traders and VAs; and most importantly,
- Help protect smallholder farmers from unscrupulous practices.

Once the *Code of Conduct* is finalized, the Ministry of Trade, Industry and Cooperatives will enforce, update, and promote the *Code of Conduct* at the national level. At the district level, the *Code of Conduct* will be enforced by District Commercial Officers in coordination with Sub-County Agricultural Officers and traders' associations.

Learning and Adaptation

Promoting transparency and trust among value chain actors

Ugandan traders and village agents often enter value chains only to buy and sell farmers' output, squeezing farmers' margins to turn higher profits and mitigate market risk. This has earned traders and their village agents a negative reputation among Uganda's farmers' government institutions and made international development organizations, which tend to be production-oriented, hesitant to work with them. In order continue incentivizing greater transparency, remove suspicions of middlemen's business practices, and build private sector confidence to invest in farmers, CPM noted that there is need to facilitate better relationships among traders, village agents, farmers, donors and government.

"With the association formation, we can now easily provide farmers with credit that enables us to increase our supply, without the fear of side selling by farmers to other traders who are not in our association. The Code of Conduct regulates us to improve our relationships with the farmers and other stakeholders. These days I am always invited to attend district ordinance meetings to provide our input as an association."

Moses Makaka, Busoga Traders' Association

As a result, CPM supported the formation of traders' associations to provide effective and affordable production and marketing services to farmers within high ethical standards. The mandate includes supporting the establishment and enforcement of the traders' Code of

Conduct not only for transactions among association members but for transactions with all other market system actors. In addition, the associations will facilitate investment and provision of improved output markets for smallholder farmers selling commodities through improved market channels. Further, they will also ensure improve linkages between associations and government-oriented market information services to improve the accuracy of information shared and expedite the flow of information. Finally, they will facilitate improved access to finance and market infrastructure.

ETC contributing to Uganda's coffee export of 20 million bags target for 2020



A pack of inputs for 50 coffee trees

Normally, farmers have been getting yields of 0.5 kilograms per tree, a year for green coffee. This is because very few farmers can afford to buy inputs for an acre of coffee which is estimated at UGX1.8 million. Further, those who can afford to buy the fertilizer could not apply it effectively due to lack of knowledge of proper application of agro-inputs. This has had a negative implication on the government of Uganda's strategy to increase coffee production to 20 million bags by 2020. CPM noted that focusing on acreage for coffee productivity was not viable

for poor resource farmers and there was therefore a need to find innovative ways to increase coffee production per tree from 0.5 to 3 kilograms. CPM in collaboration with input suppliers, developed the Every Tree Counts strategy that focuses on increasing productivity of an individual tree, to ensure that each coffee tree receives the correct amount of inputs each season to increase productivity. This costs UGX 2,000 per tree for inputs plus UGX 2,000 for the cost of services rendered by the VA making a total of only UGX 4,000 per coffee tree. The farmer would earn additional profits of UGX 13,000 per tree.

The “Mutindo Pulper Bike” – increasing the income of Arabica coffee farmers

As a result of CPM promoting various innovations to improve coffee especially in Arabica areas, which are mostly mountainous zones, farmers' yields in coffee increased to 1,200 kilograms per acre compared to yields before of 300 kilograms per acre. This increment in yields has also had a negative impact on the quality of coffee due to lack of efficient pulping machines to absorb the extra yields. In a village, there is usually one hand-pulper serving about 600 farmers which often leads to farmers pulping their coffee later than the specified 24 hours resulting in bad quality coffee. A hand-pulper can only produce 50 kilograms per hour, which means it will take on average 500 days to complete pulping for 600 farmers with an average of 1,200 kilograms per acre. The alternative is to provide an electric motorized pulper but this requires farmers travel a distance of 2-3 hours from their mountainous region to the factory, and more often than not there is usually no electricity at the factory resulting in farmers waiting for long hours for power to return.

CPM in collaboration with Munyegra Agro-machinery therefore, designed the “Mutindo Pulper Bike” – a bicycle-powered mobile coffee pulper, the first of its kind in Uganda, which processes 200 kilograms of wet coffee berries per hour. The innovation brings pulping services to the farmers' location, reducing the amount they have to spend travelling, and reduce post-harvest losses which results from delayed pulping.



A girl using the hand pulper



The Mutindo Bicycle powered mobile pulper

Building better relationships between subcounty agriculture officers and intermediaries

Most of the intermediaries working with CPM to provide production and marketing services have had challenges working with subcounty agriculture officers (AOs) who see the intermediaries as a threat and are therefore not willing to support them when they reach out to them for technical assistance. CPM has observed that only 8 of 95 subcounty AOs appreciated the VA model and the role of intermediaries. Building better relationships between the intermediaries and AOs can be rewarding in terms of farmers having access to efficient and effective production and marketing services. In order to achieve this, and create an understanding of how intermediaries work and compliment AO services using the VA model, MAAIF through the district local governments in collaboration with CPM organized a two-day workshop on making value chain analysis a useful tool in the hands of agricultural extension workers using the facilitative approach and integrating the village agent model into agricultural service delivery. The major objective of the training was to: (i) enable Agriculture Officers to understand the agricultural value chains actors and their roles; and (ii) enable Agriculture Officers to understand how to integrate the VA model in delivering efficient services to farmers. As a result of the training, 95 AOs have been equipped with all the tools used to implement the model. The trader Code of Conduct was also shared with them and they agreed to enforce ordinances to guide in regulating local trade standards.

"We have seen the positive roles that the intermediaries play in providing farmers with extension, inputs and access to markets among other services. And they reach out to many farmers more than us because of their network of agents that exists within the villages. This is very exciting we can use that network to train and reach more farmers because currently, the ratio of extension worker to farmers is 1:20,000, and we do not have the logistics and capacity to reach out to those many farmers. On the other hand, a VA can reach 200 farmers and that brings extension closer to farmers by us working with them."

William AO, Iganga District



Agriculture Officers during their training on integration of the VA model and working with intermediaries

SECTION VIII: PERFORMANCE TO DATE MARCH 2013 TO SEPTEMBER 2017

CPM has collaborated with 510 private sector entities (37 exporters & 473 traders), who have in turn invested \$17,590,177 to support 434,979 farmers to increase their productivity through 1,552 village agents who supply access to production and marketing services. These partnerships have created 667 new jobs, and placed 356 youth in apprenticeships which have potential for turning into full time employment. To date, a total of 435,307 farmers have benefited from trainings conducted by middle actors in good agronomic practices, climate smart technologies (CST), better post-harvest handling (PPH) practices and marketing, as well as financial literacy and record keeping. In addition, CPM has supported 106,565 micro, small and medium enterprises (MSMEs) including farmers to access bank loans and business development services.

To date, farmers have procured genuine inputs worth \$5,029,365 through middle actors, and accessed loans worth \$88,039,255, of which 60% was used to establish 961,473 hectares under improved technologies. Since the Activity began, gross margins in the targeted commodities and incremental sales have steadily increased. In maize, farmers' gross margins increased from \$495/ha to \$693/ha. In coffee, margins increased from \$222/ha to \$1,477/ha, and in beans, from \$263/ha to \$385/ha. Further, the value of incremental sales by these farmers to date is \$384,132,580. These increases are also attributable to Activity interventions designed to reduce post-harvest losses. Due to the improvement in quantity and quality of commodities, as well as the more efficient supply chain and productive partnerships, value chain actors have accessed better markets, and exported a total of 1,373,326 MT of coffee, 651,082 MT of maize, and 315,395MT of beans.

ANNEX A: IMPACT UP CLOSE

Partnerships that engineer innovative solutions – the bicycle-powered coffee pulper

Rich soils, high altitude, and good rainfall are key elements to produce quality Arabica coffee. However, unless the red coffee cherries are washed and pulped within 24 hours, high quality cannot be obtained, nor can smallholder farmers demand higher prices for their berries. In the Mt. Elgon region of eastern Uganda, smallholder farmers typically trek long distances over mountainous terrain to access coffee washing stations for pulping or utilize hand-powered pulpers which are cumbersome and time consuming. To address this challenge and improve coffee production efficiency, CPM partnered with youth-led Munyegera Agro-machinery (a labor-saving and post-harvest handling equipment fabricator) to design and fabricate the “Mutindo Pulper Bike,” a bicycle-powered mobile coffee pulper which processes 250 kilograms of wet coffee berries per hour compared to the hand-operated pulper that can only process 50 kilograms per hour. The pulper also reduces the drudgery and distance travelled by farmers to take their coffee to pulping centers.

Charles Mallanga the chairperson of Lambuli SACCO was very excited about this innovation. “This pulper is really gumitindo” (of supreme quality in Lugisu), he proclaimed. “It will go a long way to solve issues of coffee quality that result from delays in pulping farmers’ coffee on time and will also create more job opportunities for youth in our SACCO.”

Based upon the successful design and positive feedback received from Lambuli SACCO, CPM engaged UGAFODE to develop tailored loan products to enable youth VSAs to buy the mutindo pulper bike at an affordable cost of \$800 compared to a motorized pulper that typically costs \$2,500 each. Moreover, as a result of introduction the Mutindo Bike, 10 youth linked with KEGRA have gained employment through the provision of mobile-pulping services and Postbank in collaboration with Kinkizi Development Company (KDC), in Kanugu District are supporting the acquisition of 200 Mutindo Bike on loans which will generate an anticipated additional 200 jobs.

CPM Supports Kyazanga Farmer’s Cooperative to Become Seed Producers



A woman sorts beans at the ACE

Every planting season, seed companies and communities in Lwengo District trek to Kyazanga Farmer’s Cooperative Society to obtain high yield and quality seeds. This is premised on the reputation the cooperative society has built in the district as a quality seed producer.

The society’s new reputation in recent years has not been accidental. It is rooted in the support and training its members have secured from USAID’s Feed the Future Uganda Commodity Production and Marketing (CPM) Activity. The cooperative,

according to Joseph Asimwe, its coordinator, began as a small farmers’ group in 1997 and did not achieve much. For example, although fighting sickness, hunger and poverty was one of its major areas of focus, it only had a membership of about 15 to 20.

CPM not only rekindled the cooperative's sense of purpose, but distinctively set it apart in terms of training them in quality seed production. Working closely with the National Crops Resources Research Institute (NaCCRI), a Namulonge based research institute and the Netherlands-funded Integrated Seed Sector Development, the cooperative which currently comprises 1,086 members, is engaged in bean seed growing in addition to other activities such as savings and credit.

The cooperative society produces newly released bean seed varieties, including the NABE 15, which is ready for harvest in two months. Other varieties include NABE 16 and NABE 17 which are harvested about 70 days after planting. The new bean varieties are drought and disease resistant, fast maturing, nutritious and have a good taste. All farmers are required to sell their beans through the cooperative and each member is expected to save with the society between UGX10, 000 and UGX100, 000 every month.

Realizing the cooperative's potential in bean seed production and trade, CPM extended financial support, amounting to UGX83.4 million, to the association in 2014 to enable the members to add value to the beans. Mr. Asiimwe explains that 54 farmers' groups were also trained to make doughnuts using bean flour as the main ingredient, and today about 20 groups are still active.

Over the years, the cooperative's production potential has consistently varied. For example, the cooperative produced 82 metric tons in 2014, 46 metric tons in 2015 and 32 metric tons in 2016. The projected produce for 2017 is about 50 metric tons. To boost its production potential, the society is working with a team of about 10 village agents in Kyazanga, Lwengo District. CPM trained the village agents in good agronomic practices, post-harvest handling as well as market access. The village agents in turn passed on the skills and knowledge to farmers. In the same spirit, the cooperative has recruited and trained additional village agents to cover Masaka, Sembabule and Lyantonde Districts.

CPM's Chief of Party, Robert Anyang explains that they partnered with Kyazanga Farmers' cooperative because of its potential to enable smallholder farmers to increase and improve the quantity and quality of bean seed, thereby increasing their incomes. CPM officials trained and mentored the trader and village agents on good agronomic practices, including safe use and handling of agro-chemicals, provided market information and linkages, linked traders and village agents to sources of inputs, financing such as banks in order to access finance among other capacity-building services.

Subsequently, because of the partnership, the cooperative secured a UGX 200 million loan from Uganda Development Bank. "We used the funds for group lending and a majority of the farmers were supported with new bean seed varieties for planting, fertilizers and pesticides. We also ploughed for some farmers," Asiimwe reports. Although the farmers were hugely affected by the prolonged dry spells that hit the country at the time, association members were lucky that their loans had been insured by UAP Insurance. "Some of the farmers managed to increase their bean production potential and we have since transformed into a reputable seed-producing association," explains Asiimwe. Because of their seriousness, their bean production potential has increased to 200 acres in 2017 from 47 acres in 2013. Because farmers have followed the recommended agronomic practices, the average yield of beans per acre has increased to 800kg from 300kgs per acre in 2013.

The increase in performance has translated into increased yield and income to an annual amount of UGX 320 million. To this end, the cooperative has started constructing a storage facility with a holding capacity of 300 tons. The new facility also contains offices and meeting areas for members. Estimated to cost about UGX100 million, the association managers believe that once completed, it will be a shot in the right direction towards their overall objective of being a leading bean producing organization in the area and beyond

ANNEX B: FY 2017 ACHEIVEMENT AGAINST PERFORMANCE INDICATORS

	Above Target		Achieved Target		Below Target	
S/No	Indicator	LOA Target	FY17 Targets	FY17 Actuals	FY17 % Achievement	FY17 Performance Achievement Narratives
Purpose: Sustainably increase the production and marketing of high quality maize, beans, and coffee in 34 focus districts						
1	Gross margin per unit of land, kilogram, or animal of selected product (crop/animal/fisheries selection varies by country)	330	407	471	116%	Promoted access to genuine inputs, such as blended fertilizer, facilitated coffee demonstration sites to promote GAPS, and adopted the ETC campaign for coffee. Access to production services through the VA model contributed to an increase in gross margin for beans. However, there was a drop gross margin for maize and coffee due to the army worm outbreak that affected crops in the second season and currency fluctuations during FY17 that resulted in coffee price fluctuations.
		450	1,932	1,586	82%	
		620	646	514	80%	
2	Value of incremental sales (collected at farm- level) attributed to FTF implementation	171,700,000	156,106,145	130,874,401	84%	Created trader associations and farmer groups to improve the value chain relationships between the farmers, VA, traders, and buyers. The trader associations and farmer groups ensure transparency and access to markets, which increases overall sales in the three value chains and increases the quantities sold by the farmers. However, the army worm outbreak and price fluctuations affected the quantities produced and the volumes sold in the two seasons.
Sub IR. 1.1: Increased use of improved farm management practices						
3	Number of Individuals who have received U.S. government supported short-term agricultural sector productivity or food security training	420,000	80,000	74,757	93%	The Activity introduced the ETC model to VAs, who provided individual training to new farmers adopting the model. The VAs also conducted targeted training to address the armyworm outbreak, which largely affected maize production. While the VAs conducted a few group trainings in areas affected by overlapping rains due to climate change, they largely purchased newly harvested beans.

S/No	Indicator	LOA Target	FY17 Targets	FY17 Actuals	FY17 % Achievement	FY17 Performance Achievement Narratives
4	Number of farmers and others who have applied new technologies or management practices as a result of U.S. government assistance	290,000	241,059	255,491	106%	A network of 1,552 VAs provided embedded extension services to farmers, which improved farmers' practices. The ETC model encourages farmers to adopt better practices based on the resource available and allows farmers to adopt improved technologies. As a result of climate change and to improve their yields, most farmers adapted climate smart technologies, such as water efficient maize hybrids, and conservation agriculture, such as zero tillage planting and blended fertilizers.
5	Number of food security private enterprises (for profit), producer orgs, water user associations, women's groups, trade and business associations, and community-based organizations receiving U.S. government assistance	27,600	48,614	65,684	135%	VAs facilitated the formation of farmer groups to provide production and market support services to farmers.
6	Number of farmers benefiting directly from Activity interventions	400,000	306,896	434,979	142%	Promoted ETC by collaborating with Akorion and Amarin to provide services to farmers through VAs. VAs therefore developed their businesses by reaching more farmers. However, outreach to farmers was limited because some traders were dropped during the clients review for the final implementation year.
7	Number of private enterprises (for profit), producer orgs, water user associations, women's groups, trade and business associations, and community-based organizations that applied new technologies or management practices as a result of U.S. government assistance	13,900	48,614	56,689	117%	Collaborated with Akorion and Amarin to train traders and VAs to support the adoption of organization and management technologies.

S/No	Indicator	LOA Target	FY17 Targets	FY17 Actuals	FY17 % Achievement	FY17 Performance Achievement Narratives
8	Number of hectares under improved technologies or management practices as a result of U.S. government assistance	120,300	404,900	341,463	84%	As a result of the use of IEC training materials and video animation, the adoption of promoted practices from learning sites, and access to ready markets, farmers have more land used by improved technologies, which increases production and sales. However, some farmers were not able to access new loans to purchase improved seeds due to crop failure caused by drought and the army worm outbreak. This resulted into a drop in the use of improved technologies, particularly during the second maize season.
9	Number of labor-saving technologies that meet women farmers' needs made available for transfer- Output	14	1	3	300%	Increases in farmers' coffee yields resulted in the development of a mobile coffee pulper that reduced the labor required to pulp coffee. Farmers pulp an average of 30kg/hour by hand, but with the mobile coffee pulper farmers can pulp an average of 250kg/hour. In addition, CPM developed a labor saving technology manual to support the use and adoption of labor saving technologies and training by artisans.
Sub IR 1.2: Increased use of high quality agricultural inputs						
10	Input sales by activity-assisted intermediary business models	4,010,000	1,700,000	1,365,175	80%	There was a significant increase in the sale of inputs related to the coffee value chain as a result of the promotion of the ETC model. However, due to the armyworm outbreak, maize farmers received approximately \$4.4 million free inputs from the Government of Uganda's Operation Wealth Creation Office. These inputs were procured directly from China and affected intermediaries selling pesticides.
11	Percentage of farmers acknowledging positive benefits from the accessed inputs	31%	72%	78%	108%	CPM exceeded targets for farmers acknowledging positive benefits from accessed inputs due to the adoption of the ETC model, as farmers' coffee yields per tree increased from 1kg to 3kg and resulted in more profits. In addition, farmers who used pesticides to control the armyworm outbreak benefited in terms of yields harvested, compared to farmers who did not use pesticides.

S/No	Indicator	LOA Target	FY17 Targets	FY17 Actuals	FY17 % Achievement	FY17 Performance Achievement Narratives
12	Percentage of farmers purchasing inputs from village agents and other promoted models	34%	65%	61%	93%	The activity promoted access to inputs through several models, including door to door services and the ETC campaign to support access and the use of genuine inputs, but 22 percent of farmers received free inputs from GOU and some farmers preferred to purchase inputs from the local markets.
Sub IR 1.3: Increased access to production support services						
13	Number of radio, SMS, and other media awareness programs designed to encourage youth to work in value chain businesses implemented	10	2	6	300%	CPM held a behavior change radio campaign with four radio stations to encourage youth to engage in farming as a lucrative business. These campaigns sensitized youth about opportunities as VAs within the coffee, maize, and beans value chains, providing production and marketing services.
14	Number of youth apprenticeships in value chain businesses brokered by the Activity	115	80	176	220%	As a result of collaboration with Akorion and traders, spraying groups for youth were created to facilitate youth trainings and youth business creation.
15	Number of rural households benefiting directly from U.S. government interventions-Output	215,000	315,683	326,245	103%	CPM promoted ETC and collaborated with Akorion and Amarin to support the provision of services to farmers through VAs, which allowed VAs to learn business approaches to reach more farmers and households, and therefore grow their businesses.
16	Number of jobs attributed to FTF implementation	382	670	667	100%	CPM increased opportunities for youth by partnering with a trader to establish a youth call center in Western Uganda. The call center helped youth develop business skills and provided information to youth interested in providing spraying services under the ETC model. Through a cost share, CPM procured and distributed spray pumps, which supported the creation of employment opportunities for youth through spraying services providers (SSP) groups.
17	Value of Agricultural and Rural Loans	2,890,000	34,186,004	48,790,204	143%	CPM continued to link traders to banks, supported the formalization of VA associations to support access to finance, and promoted "agency banking," which supports traders who help farmers access loans as individuals. However, access to loans is still impacted by some farmers, village agents, and traders' lack of security.

S/No	Indicator	LOA Target	FY17 Targets	FY17 Actuals	FY17 % Achievement	FY17 Performance Achievement Narratives
18	Number of MSMEs receiving USG assistance to access bank loans	100	56	106,406	190011%	CPM collaborated with Amarin to carry out additional business development training to support access to credit for farmers and help traders access new bank products. CPM also supported the formalization of VA associations to help VAs reach more farmers and improve their access finance by creating an easy forum for farmers to access loans.
19	Number of public-private partnerships formed as a result of FTF assistance	480	97	127	131%	Partnerships with WFP and Akorion on the agriculture market support led to the creation of new partnership with satellite collection points. CPM created linkages between Activity supported traders and the satellite collection points to increase markets for the traders.
20	Value of new private sector investment in the agriculture sector or food chain leveraged by FTF implementation	10,450,000	6,932,215	7,149,186	103%	CPM cost shared the procurement of PHH equipment, including hullers, shellers, and moisture meters, and supported traders to invest in PHH equipment.
Sub IR 2.1: Improved market linkages						
21	Volume of exports by Activity assisted traders and exporters	288,900	202,000	1,513,784	749%	CPM supported champion traders to sign supply contracts with buyers in collaboration with WFP satellite collection points. The introduction of buying and delivery books improved traders' purchase and export tracking, which enabled traders and CPM to accurately track the volumes being traded. In addition, CPM promoted grain export procedures and guidelines among traders, and disseminated maize grain standards to increase the volume and quality targeted for exports.
22	Number of e-payments completed by value chain actors as a result of the activity's promotion of USAID's Better than Cash Initiative	81,600	42,568	46,170	108%	CPM collaborated with Akorion to roll out an e-voucher payment system to support the use of e-payments by farmers and village agents for ordering and paying for inputs and storage equipment.
Sub IR 2.2: Increased access to market support services						
Sub IR 2.3: Improved post-harvest handling						

S/No	Indicator	LOA Target	FY17 Targets	FY17 Actuals	FY17 % Achievement	FY17 Performance Achievement Narratives
23	Reduction in post-harvest losses by activity-assisted smallholders	9%	8%	4%	200%	Traders invested in PHH equipment, and CPM disseminated PHH animation videos and provided training on PHH practices to reduce PHH losses.
		4%	7%	6%	117%	
		13%	8%	5%	160%	
24	Total increase in installed storage capacity	24,000	116,120	183,100	158%	CPM increased installed storage capacity by supporting traders and promoting the use of silos.
Other Indicators Specific to Gender and Climate Change						
25	Proportion of female participants in U.S. government-assisted programs designed to increase access to productive economic resources	40%	54%	48%	89%	The Activity improved women's access to resources through interventions targeting women, such as COMBO services, and training conducted by the VAs.
26	Proportion of females who report a change in self-efficacy at the conclusion of U.S. government-supported training/ programming	30%	44%	48%	109%	CPM reached additional women as result of the adoption of the VA model, the promotion of the ETC campaign, the promotion of COMBO services, and the adoption of IEC training materials that helped VAs facilitate trainings for women. As a result of climate change, minimal trainings were conducted in areas with overlapping rains throughout the year. In these areas, VAs bought newly harvested beans instead of conducting group trainings, which affected the number of women reached.
27	Number of stakeholders implementing risk-reducing practices/actions to improve resilience to climate change as a result of USG assistance	210,000	58000	223,861	386%	CPM trained champions in eight districts to support the promotion of climate smart practices and developed video animations with messages about climate change.

ANNEX C: LIFE OF ACTIVITY ACHEIVEMENT AGAINST PERFORMANCE INDICATORS

	Above Target		Achieved Target		Below Target				
S/No	Indicator		LOA Target	FY 14 Actuals	FY 15 Actuals	FY 16 Actuals	FY 17 Actuals	LOA Achievement	% Achievement on LOT
Purpose: Sustainably increase the production and marketing of high quality maize, beans, and coffee in 34 focus districts									
1	Gross margin per unit of land, kilogram, or animal of selected product (crop/animal/fisheries selection varies by country)		330	249	381	391	471	373	113%
			450	251	1,757	1,781	1,586	1344	299%
			620	567	648	618	514	587	95%
2	Value of incremental sales (collected at farm- level) attributed to FTF implementation		171,700,000	7,547,941	156,106,145	97,759,965	130,874,401	392,288,452	228%
Sub IR. 1.1: Increased use of improved farm management practices									
3	Number of Individuals who have received U.S. government supported short-term agricultural sector productivity or food security training		420,000	116,613	128,433	165,342	74,757	485,145	116%
4	Number of farmers and others who have applied new technologies or management practices as a result of U.S. government assistance		290,000	52,276	103,647	185,430	255,491	596,844	206%
5	Number of food security private enterprises (for profit), producer orgs, water user associations, women's groups, trade and business associations, and community-based organizations receiving U.S. government assistance.		27,600	4,473	12,600	45,946	65,684	128,703	466%
6	Number of farmers benefiting directly from Activity interventions		400,000	109,633	226,896	369,840	434,979	434,979	109%

S/No	Indicator	LOA Target	FY 14 Actuals	FY 15 Actuals	FY 16 Actuals	FY 17 Actuals	LOA Achievement	% Achievement on LOT
7	Number of private enterprises (for profit), producer orgs, water user associations, women's groups, trade and business associations, and community-based organizations that applied new technologies or management practices as a result of U.S. government assistance.	13,900	2,302	8,250	42,699	56,689	109,940	791%
8	Number of hectares under improved technologies or management practices as a result of U.S. government assistance	120,300	31,050	251,543	337,417	341,463	961,473	799%
9	Number of labor-saving technologies that meet women farmers' needs made available for transfer- Output	14	4	5	15	3	27	193%
Sub IR 1.2: Increased use of high quality agricultural inputs								
10	Input sales by activity-assisted intermediary business models	4,010,000	981,817	1,290,670	1,391,703	1,365,175	5,029,365	125%
11	Percentage of farmers acknowledging positive benefits from the accessed inputs	31%	73%	89%	53%	78%	73%	236%
12	Percentage of farmers purchasing inputs from village agents and other promoted models	34%	58%	69%	67%	61%	64%	187%
Sub IR 1.3: Increased access to production support services								
13	Number of radio, SMS, and other media awareness programs designed to encourage youth to work in value chain businesses implemented	10	2	2	6	6	16	160%
14	Number of youth apprenticeships in value chain businesses brokered by the Activity	115	25	41	114	176	356	310%
15	Number of rural households benefiting directly from U.S. government interventions-Output	215,000	65,229	81,149	275,683	326,245	326,245	152%
16	Number of jobs attributed to FTF implementation	382	208	349	550	667	1,774	464%
17	Value of Agricultural and Rural Loans	2,890,000	322,323	12,629,803	26,296,925	48,790,204	88,039,255	3046%

S/No	Indicator	LOA Target	FY 14 Actuals	FY 15 Actuals	FY 16 Actuals	FY 17 Actuals	LOA Achievement	% Achievement on LOT
18	Number of MSMEs receiving USG assistance to access bank loans	100	24	67	68	106,406	106,565	106565%
19	Number of public-private partnerships formed as a result of FTF assistance	480	134	150	99	127	510	106%
20	Value of new private sector investment in the agriculture sector or food chain leveraged by FTF implementation	10,450,000	2,287,954	2,376,191	5,776,846	7,149,186	17,590,177	168%
Sub IR 2.1: Improved market linkages								
21	Volume of exports by Activity assisted traders and exporters	288,900	140,761	370,409	314,848	1,513,784	2,339,802	810%
22	Number of e-payments completed by value chain actors as a result of the activity's promotion of USAID's Better than Cash Initiative	81,600	6,342	17,780	14,910	46,170	85,202	104%
Sub IR 2.2: Increased access to market support services								
Sub IR 2.3: Improved post-harvest handling								
23	Reduction in post-harvest losses by activity-assisted smallholders	9%	11%	10%	10%	4%	4%	225%
		4%	6%	6%	9%	6%	6%	67%
		13%	17%	16%	9%	5%	5%	260%
24	Total increase in installed storage capacity	24,000	4,701	10,905	96,767	183,100	295,473	1231%
Other Indicators Specific to Gender and Climate Change								
25	Proportion of female participants in U.S. government-assisted programs designed to increase access to productive economic resources	40%	47%	46%	50%	48%	48%	119%
26	Proportion of females who report a change in self-efficacy at the conclusion of U.S. government-supported training/programming	30%	3.67%	46%	58%	48%	39%	130%
27	Number of stakeholders implementing risk-reducing practices/actions to improve resilience to climate change as a result of USG assistance	210,000	48,154	101,942	266,711	223,861	490,572	234%

ANNEX E: ENVIRONMENTAL COMPLIANCE

In line with USAID's Environmental Monitoring and Mitigation Plan (EMMP), aimed at identifying activities requiring mitigation, the threats posed by the program activities, as well as the mitigation measures planned to combat the identified threats, and the plan for monitoring the implementation of these mitigation measures, CPM carried out a number of interventions.

The Activity promoted and trained intermediaries on improved farm management practices focusing on natural resources management, bio-diversity conservation and environmental protection. These included conservation tillage, climate smart technologies, and soil and water conservation measures. The Activity facilitated and supported development, adaptation and translation of technical IEC materials on improved agricultural techniques and management practices for the target value chains in various languages.

CPM exposed traders and village agents to drought tolerant (DT) and water efficiency maize for Africa (WEMA) varieties (e.g. Bazooka, Longe 10H, UH5052 and early maturing bean varieties). These provided opportunities to mitigate stress on low moisture soils during their growth cycles.



Youth who were trained on managing the Fall Armyworm spraying a maize garden

To mitigate the potential negative impact of agro-chemical usage, CPM, through a cost share arrangement with various partners, promoted electrical spray pumps. The pumps are efficient, economical and labor-saving. In collaboration with equipment suppliers, CPM also equipped village agents with knowledge on operation and maintenance of the pumps, safe use and handling of agro-chemicals including environmental regulations and guidelines as per Uganda Crop Protection Pesticide Evaluation Report and Safer Use Action plan (PERSUAP). They were also linked to agro-dealers for access to genuine inputs.

Furthermore, CPM collaborated with Grainpulse to promote small unit packs of fertilizers that are easily accessible and affordable by smallholder farmers. An example is the Gimusa Kit promoted by CPM in collaboration with Akorion and Bukoola Chemicals. For postharvest management, the Activity collaborated with various partners such as WFP, Akorion, and equipment fabricators to promote improved handling, processing and storage of coffee, maize, and beans using mobile coffee hullers and pulpers, bean threshers, shellers, driers, and silos.



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